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Original Articles

SYPHILITIC DISEASES OF THE NERVOUS SYSTEM

THEIR RELATIONSHIP TO INADEQUATE AND IMPROPER TREATMENT OF SYPHILIS

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The object of this communication is to point out that: 1. The occurrence of nervous diseases due to syphilis indicates that present-day treatment of syphilis is inadequate. 2. The teachings which promulgate the belief that such treatment is adequate are pernicious and far-reaching in their injuriousness. 3. Iodid of potassium is not in the strict sense an antisyphilitic agency, in so much as it has not been shown to have a specific action on the pale spirochete.

There are certain diseases of the nervous system, such as tabes, general paresis, a variety of myelitis, meningitis, endarteritis and neuritis, that are due directly to syphilis. This fact is so universally conceded that no attempt will be made here to give it statistical support, nor shall I debate the question whether or not certain of these diseases, such as tabes and general paresis, are ever due to other causes than syphilis. It is generally admitted that an antecedent infection of the blood by the spirochete of syphilis is the essential preparation for these diseases.

Until recently, much time and pains have been expended to prove that tabes and paresis were not syphilitic diseases in the strict sense of the term. That is, that the morbid process in the spinal cord and brain is not structurally of syphilitic material, that they are what were, and are still, called parasyphilitic diseases. It has been assumed that the syphilitic poison in the system causes a characteristic histologic reaction evidenced by what is known as the syphilitic exudate, and by the formation of tissue of extremely simple organization.

This assumption is purely gratuitous; and one of the results of the chemicopathologic investigations initiated by Bordet and Gengou and carried on by means of the procedures suggested by Wassermann, Noguchi and others, has been to demonstrate that the syphilitic poison is active in the system of the individual whose tissues are the seat of so-called primary degenerative disease such as tabes. It may legitimately be held, then, that syphilis is the cause of such degeneration.

Soon after I first became interested in the study of nervous diseases, being then in the way of observing a large number of cases of organic diseases, I was struck by what seemed to me a most inexplicable state of affairs relative to syphilitic and so-called parasyphilitic nervous diseases, *viz.*, that such diseases developed as soon after infection, and as virulently, if I may use that term, in those who had received what is considered to be adequate treatment for syphilis, as they did in those who had received little or no treatment. At that time I published a study of this subject.[1] This paper was never widely noticed or commented on. Some of the views that were expressed therein concerning the advisability of antisyphilitic treatment of the so-called parasyphilitic nervous diseases are now no longer held by me, but many of the facts which that investigation developed have been corroborated by further experience.

The only conclusion that I could draw from the facts set forth in that paper was that so-called adequate treatment of syphilis was in many instances inadequate, otherwise diseases of the nervous system due to syphilis would not develop. Since that time I have sought to inquire carefully into the treatment that has been given to patients who have come under my observation seeking relief from syphilitic diseases, especially tabes, general paresis, syphilitic spinal paralysis, pachymeningitis, disseminated cerebrospinal syphilis and cerebral and spinal thrombosis at the time of and soon after infection. It has astonished me to find that nearly all had been given potassium iodid often in large doses in the early stages of the disease, and that in the majority of cases the mercury given was administered in pill form.

In 100 consecutive cases of tabes there was a distinct history of syphilitic infection in 74. The average age of infection was 25; the average age when symptoms of tabes developed was 37; the average duration of treatment at the time of infection was 5 months. These figures are not of much value in estimating the adequacy of treatment to prevent post-syphilitic disease, for a few patients who had had no treatment at all bring the average duration of treatment down very low.

On the next page is a tabulated study of the 24 patients of this series who denied syphilis; it is interesting because it shows that in many of them there were incontestable evidences of syphilis.

It is impossible to determine the treatment which patients with general paresis have had with as much accuracy as one can determine it in tabetics. The mental state of many of them is such that slight reliance can be placed on their statements. This accounts also for the fact that a history of syphilis is not obtained so often as in tabetics. In 100 consecutive cases seen in hospital and private practice acknowledgement or history of syphilitic infection was obtained only in 63 instances. In many of those in whom there was no history of syphilis a positive Wassermann reaction was obtained.

In 38 cases of that form of subacute and chronic myelitis known as syphilitic spinal paralysis, a history

1. The Post-Graduate, July, 1896.

of infection was given in 31 instances. The Wassermann reaction was positive in 5 of the remaining 7 cases, and in 3 cases the diagnosis was made though there was no history of syphilis, this before the Wassermann test was discovered.

Of these 38 individuals, 19 had received treatment for nearly a year, 7 had received no treatment after the local manifestations had disappeared and 5 had had treatment for a few weeks. In every instance in which an intelligent account of the treatment given could be obtained, it was learned that iodid of potassium had been taken. In many cases the iodid was administered from the

Sex.	Age.	Age When Symptoms Developed.	Remarks.
Male.....	45	42	Death from tabo-paresis at 50.
Male.....	45	43	Spinal cord fluid shows marked lymphocytosis.
Male.....	37	36	Marked improvement under mercurial injections.
Male.....	44	40	Optic type of tabes.
Female...	46	46	Ten miscarriages—improvement under injections.
Male.....	53	45	Death from exhaustion at 57.
Male.....	43	40	Wife had had several miscarriages—no living children.
Male.....	55	40	Marked improvement from taking mercurial injections.
Male.....	44	42	Improved while taking mercury.
Male.....	47	39	Heavy smoker and sexually intemperate.
Female...	42	40	Severe attack of malarial fever at 24—congestion of brain.
Female...	32	32	Said to have developed after shock in car accident—died at 37. Coroner's case.
Male.....	49	32	Heavy smoker.
Male.....	49	44	Wassermann reaction positive.
Male.....	43	38	Heavy smoker and drinker. Arteriosclerosis.
Male.....	55	51	Influenza at 48.
Male.....	38	35	Wassermann reaction positive.
Male.....	40	35	Wassermann reaction negative.
Female...	30	27	Sexually intemperate—At 35 greatly improved.
Male.....	34	31	Wassermann reaction positive.
Male.....	43	42	Reported improved.
Male.....	43	40	Improved.
Male.....	35	32	Wassermann reaction positive.
Male.....	40	33	Wassermann reaction positive.
Female...	38	34	"Malaria" when first married. "Shingles" at 28.
Female...	24	21	Has symmetrical scars on body.

day that the patient put himself under the physician's care. To cite a few instances:

CASE 1.—Mr. X. was seen at the request of Dr. J. F. Erdmann for symptoms of brachial neuritis.

When 22 years old he had syphilitic infection, the ordinary local lesion, for which he consulted his physician in Mobile. The physician cauterized the lesion, gave him pills, one to be taken 3 times a day, and a "salt-tasting" medicine 10 drops in a dose, which was to be increased to 60 drops 3 times a day. This was continued for 6 months, the medicine being diminished or interrupted when disagreeable symptoms arose. At the end of that time he was advised to continue the medicine for another 6 months. When he was 38 years old, he was operated on for an acute inflammation around the cecum; the wound did not heal. Dr. Erdmann was asked to give an opinion concerning his condition, and suspecting that the antecedent syphilis had something to do with the retardation of his recovery, advised mercurial injections, and soon after asked me to see him, because of the symptoms mentioned above. The Wassermann reaction was positive though he had had intense mercurial treatment. Within 6 months the man recovered, and now, a year later, the Wassermann reaction is negative, and there is no evidence of disease of any kind.

CASE 2.—A man now 30 years old, became infected with syphilis when 24. Almost from the beginning he displayed phenomena of great depression and self-concern. Within a year he tried to commit suicide, and within two years he had evidences of tabes with such mental symptoms that it was thought that the disease was in reality tabo-paresis. His mental symptoms subsided, and now he is an example of true tabes. His physician stated he had treated him for the original infection with mercury and iodid and had him more or less constantly under such treatment but it could not be determined that any manifestation of such medication had occurred save iodism.

CASE 3.—The patient is a young man with syphilitic spinal paralysis. He contracted syphilis during his college days. He consulted a physician at once, who, he writes, gave him "mixed treatment" for nearly two years. Symptoms of subacute myelitis developed when he was 29 years old. He has practically completely recovered under intensive mercurial treatment.

CASE 4.—A man, aged 44, consulted me in October, 1906, seeking relief from epilepsy which had developed during his forty-second year. He had no pupillary or mental symptoms to suggest general paresis, and no detectable arterial sclerosis. When he was 18 years old he contracted syphilis and was treated by a physician in his native city in Iowa. This physician gave him one dose of mercury, and iodid of potassium for one year. At the end of that time he told him that he was cured and that he was permitted to marry. He married, his wife had one child and six miscarriages.

This patient is a man of unusual intelligence, the director of a large business, and his statements are to be relied on. When he was seized with symptoms of epilepsy he apprised his physician of his previous disease and he was given tablets of biniodid of mercury, 1/30 grain, 3 times daily and iodid of potassium, 20 grains 3 times a day, increased to twice this amount. As this medication did not control his attacks, he was sent from the state of Washington, in which he now lives, to New York. He was put under intensive mercurial treatment, injections of bichlorid of mercury, which were kept up for 4 months, and this was followed by vigorous tonic treatment. During the year following this treatment he had two slight attacks. Since then he has had none. The Wassermann test made Jan. 20, 1910, gave a negative result.

I could cite a great number of such instances as these. In fact, I may say that I have been forced to conclude that syphilis has been and is treated in this country to-day not with mercury, as practically all teachers of this branch of medicine say it should be treated, but with mercury and iodid of potassium, the former administered in a desultory and inadequate manner, and if I may be permitted an opinion based on an experience with patients from all parts of the country more reliance is placed on the iodids as a curative agency than on mercury.

"Students are very rarely well instructed in syphilis; they are almost never thoroughly instructed," say Osler and Churchman.[2] If this is true, it may account for the fact that syphilitic nervous diseases seem to be increasing rather than decreasing. It would seem to me that the chief explanation of the occurrence of syphilitic nervous diseases is that the specific action of mercury in syphilis is not generally accepted or believed, and that there is an inherited and acquired belief that potassium iodid has a specific action in syphilis; and this in face of the fact that most modern syphilographers of the present day, especially in this country, are emphatic and direct in maintaining that the former is the real specific in the disease. Among these, Piffard is the most conspicuous example. As early as 1876 he pointed out that mercury was the agent that cured syphilis, while iodid of potassium was the vehicle which removed some of the manifestations of syphilis. It would seem now to be proved experimentally by Roux and Metchnikoff, who have succeeded in inoculating anthropoid apes, that the effects of the inoculation could be prevented before the virus gained entrance to the general system by the application

2. Osler: Modern Medicine, iii, 503.

of mercury. In other words, mercury applied locally destroys the spirochetes. They even go so far as to say that mercury is a greater specific against the local disease than against the general disease.

I cannot enter into a discussion of this subject here, because it would necessitate citation of the experiments of Neisser which seem to show that injections of mercury immediately after the inoculation of the syphilitic virus prevents neither the development of a chancre nor the general distribution of the virus throughout the body. It would also necessitate opening that interminable inquiry whether the chancre is a local or a constitutional manifestation; or put in another way: when does it cease to be the former and become the latter? Finally, it would necessitate review of a similarly unanswered question: When shall the treatment of syphilis be begun? It would be fortunate if we could forget and unlearn all we have been taught by tradition concerning these matters, and begin with our present-day means of acquiring information concerning them. I assume that it is admitted to-day that the organism of Schaudinn may gain entrance to the system in various ways, and that at the point of entry, neither the chancre, chancroid, preputial herpes, venereal wart or gonorrheal inflammation need exist. Furthermore, it is admitted that one of these and more particularly the sore known as chancre not only marks the focus of infection but that its secretions contain the spirochetes which can be detected by suitable examination. This being a fact, the time to begin the treatment of syphilis is when the spirochetes are found and the substance with which to treat it is that which has a specific action on the spirochetes—mercury. Now, so far as I am able to determine by examination of the work of the authorities it has not been shown that iodid of potassium has any specific effect on the microorganisms. Since the days when its use was first popularized by Ricord, it has been stated and restated that it is mercury which cures syphilis, potassium iodid which erases the symptoms. When I state that the iodid of potassium is not an antisyphilitic agency, I do not mean to contend that it is not useful in the treatment of syphilis and of wondrous efficacy in overcoming some of the manifestations of syphilis, particularly so-called gummatous formations. It would be folly to deny what is not only common knowledge of all physicians, but what is every day being demonstrated anew. No more do I mean to deny that in certain cases of malignant precocious syphilis the disease does not yield to treatment until iodid of potassium is added to the medication. But the fact that iodid of potassium is a most potent and sometimes marvelous agency to cause absorption and dispersal of an exudate which is pathognomonic of the existence of spirochetes is no evidence that iodid of potassium has any action on the spirochetes themselves. Though a certain chemical may, for example, negative the action of, or dissolve and dissipate, a substance which is formed in a reservoir, polluting the water to the detriment of all who drink thereof, it does not follow that that same chemical scattered lightly on the soil of forest and hillside from which the reservoir drains its supply will prevent the formation of the deleterious substances.

I venture to believe that iodid of potassium is not an antisyphilitic agency in the strict sense of the term. There is no evidence that I have encountered to indicate that it has destructive effect on the spirochetes. I am aware that there are certain cases in which the Wassermann test continues to give positive reaction until iodid of potassium has been added to the medication, but that does not prove that the drug is inimical to the life of the spirochetes. Nor am I aware that satisfactory evidence has been offered to prove that antibodies disappear under the use of iodid of potassium alone, although I have read the article of Lesser on this subject.[1] Furthermore, I am of the opinion that not infrequently the use of iodid of potassium during the early stages of syphilis is deleterious in so much as it impairs the patient's vitality and interferes with that condition on which the cure of syphilis is dependent—the reaction which takes place in the patient's tissues through the administration of the curative agency, mercury.

The other point that I wish to make is that so long as it remains the custom, which it would seem is now well nigh universal, to administer mercury by the mouth, we cannot hope to know whether or not a sufficient amount of mercury is absorbed to combat successfully the action of the spirochetes and to annihilate them. The occurrence of ptyalism and other disturbances of the digestive tract is no indication that mercury is being taken in doses adequate to combat the disease. Many individuals present indications of the toxic effects of the drug before any considerable quantity is taken. An idiosyncrasy to the drug or an intolerance of it, does not signify that the system is impregnated, yet how often we find in the history of a given case that on the occurrence of such symptoms the amount of the drug was materially diminished or some other substance substituted for it. We cannot possibly know how much mercury is absorbed into the system unless we rub it through the skin or introduce it hypodermatically. In that way alone can we judge how much mercury is being put into the system, and satisfy ourselves that a sufficient amount has been absorbed to cure the disease or to kill the *Spirochæta pallida*.

The adequate treatment of syphilis is not the administration of so many grains of mercury and so many ounces of iodid of potassium, nor yet is it encompassed by "taking mercury for a year and potash for six months." It is encompassed by getting an amount of mercury into the system that will prevent the propagation of the specific organisms and the formation of the antibodies, and the way to tell if this is being accomplished is by the application of the Wassermann test. Not until we get repeated negative reactions are we justified in discontinuing mercurial treatment.

Finally, the individual who has syphilis is an important factor to consider if it is our ambition to cure syphilis and to prevent syphilitic nervous diseases. How many of these patients, even the most intelligent, appreciate that it is of vital importance to receive prolonged, and often debilitating and distressing treatment? Now that we have a safe therapeutic test in the Wassermann reaction, every patient should be urged imperatively to submit himself for such examination at least once a year for five years after he is discharged by his physician.

In conclusion, I wish to state my belief based on my entire experience and the consideration which I have given to the disease and its sequelæ from a theoretical standpoint, that we shall be able materially to diminish the occurrence of syphilitic nervous diseases by advocating the use of mercury as a specific for syphilis and deprecating the use of iodid of potassium save as an absorbefacient of gummatous tissue. Thoroughness of mercurial treatment is our only safeguard against diseases of the nervous system that flow out of syphilis.

1. Lesser: Deutsch. med. Wchnschr., 1909, xxv, 379.

It is no part of my purpose to decry the therapeutic property of the salts of iodid. Were it so, I could marshall an array of facts to prove their injuriousness when given in comparatively small doses (from 40 to 60 grains a day) for a protracted time. I appreciate the therapeutic possibilities of the iodid, but I am convinced that the therapy of organic nervous diseases, save gummatous formation on and within the nervous system, would be more satisfactory if the salts of iodin were no longer in use.

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STANDARDS IN MEDICAL EDUCATION AS RELATED TO STANDARDS IN GENERAL EDUCATION *

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It is not necessary to remind you that American education in general is just now on a rising tide of interest in our scholastic standards. How long that tide has been rising was shown to me a few weeks ago when I was present, by invitation, at a meeting of the senate of the Methodist Episcopal Church. I found there a body of men, engaged in fixing, at a high level, the standard for collegiate institutions to be recognized and in a measure supported by that religious society, and I learned that the far-reaching action of this senate at its latest meeting is the culmination of labors in which the same body has been engaged for twenty years.

There are, of course, other endeavors of a somewhat similar character which have been in progress over much longer periods. Good movements do not begin and end. They arise through a redirection of earlier movements and take their new turn and impetus under the pressure of new needs. In education we have always sought for the better as against the worse. But there are new needs at this time which demand that we discriminate more sharply than has hitherto been done. We are seeking the best, and sometimes we must look on even the good as among its dangerous enemies.

The work that the Council on Medical Education is doing for medical education is all bound up with the movements of our time in general education, and in education of every type and grade. It is because you have recognized this fact so clearly and because in its special field you have done so immensely difficult and significant a work, that, in spite of being a mere layman among physicians, I have come, to-day, with the keenest anticipation, to the meeting of this Council.

STANDARDS OF EDUCATION

The considerations which have given new vitality to the standardizing movement are of various kinds. In the end and summing up, they are chiefly moral considerations. This fact calls for emphasis. It is bad for our moral standards, unspeakably bad, that we should be content with low or doubtful standards in our education. The recognition of this fact, more than anything else, lends poignancy to the demand that the educational offerings of different institutions shall have an ascertainable value. The finest values in education, to be sure, can never be measured or compared. And that is not attempted. The demand is only that the measurable elements of education shall be submitted to measurement. One of the keenest moral twinges of this demand comes with the thought that only by such standardizing can we assure to our people everywhere that they are getting full measure in education, or expose the cheat if the measure has been scanted.

But there are other considerations that are not to be ignored. Some of these are financial. It has become apparent, by slow degrees, that light weights and cheap adulterations do not pay in education any more than they pay in trade. An artificial providence has hastened the recognition of this fact, by rewarding, on the spot, those institutions which measure up to its prescribed levels, and withholding payment from those who do not. Where public authorities have failed to act and the vague demands of public opinion have failed to do their work, two or three private individuals with money in their hands have accomplished wonders in a very little time.

Then, there are purely academic influences which have had great weight. A new university, in which high attainments and high requirements are predominant, wins the attention and commands the confidence of the public over some great section of our land. Its standards displace the lower ideals of an earlier time. The educational level of a whole region is raised, and insensibly the public has become more discriminating in its sense of educational values. Such an influence, in recent years, has centered here in Chicago and has spread abroad throughout the middle west. And other examples, not a few, might be enumerated.

Along with these considerations and influences have been others which have centered in the several professions. Professional pride, professional advantage, and the sense of professional responsibility, have led engineers, lawyers, teachers, and those of other crafts and guilds, to make higher demands on their own members than were made by law or by public opinion. As the most scientific of the older professions, we look to the medical fraternity to lead in such a movement. And the leadership already displayed by this Council has helped to advance the standards of education in general.

A HISTORY OF MOVEMENTS FOR STANDARDS IN EDUCATION

Before passing on to speak of the considerations to which I should like particularly to direct attention to-day, let me mention a comprehensive review of the standardizing movement which is now in preparation. I refer to that undertaken by President MacLean, of the University of Iowa, which is to be published some months hence by the Bureau of Education. So great progress has been made of late in the determination of scholastic standards over disconnected but not unrelated fields, so chaotic, after all, is the present situation, that the time seems opportune for a setting forth of the history and results of the movement in all of its principal ramifications. It is such a survey, or at least a first draft of such a survey, that President MacLean has undertaken. There is reason to hope that his bulletin may prove an indispensable handbook for those who are concerned with the determination of standards in all parts of the educational field.

The preparation of such a handbook is one small part of what the federal government can contribute to this movement. Let me now speak briefly of certain other governmental aspects of this matter; for it is the public and patriotic considerations entering into the case which I should like to bring to the front at this time.

* Read before the Joint Conference of the Council on Medical Education and the Committee on Medical Legislation of the American Medical Association, Chicago, Feb. 28-March 2, 1910.

WORK AND LIMITATIONS OF VARIOUS AGENCIES

Professional and private agencies have a great part to perform in the bettering of educational and professional conditions. Besides their services of a more permanent character, they must do a great part of the necessary pioneering. But when they have blazed the way, when they have cleared the ground, it is the part of governments, municipal, state and national, to fix and confirm, and perhaps to modify, a part of the gains which they have made, in the forms of law and of administrative procedure. Those results of private initiative which are the most widely applicable and useful are likely to be found suitable for embodiment in the fabric of government. While government must stop short of many good acts, because they do not yet represent the will and purpose of the people as a whole, the popular will, when it can be brought to approve of some part of a program of betterment, serves by its laws and regulations to encourage the labors of those who are working for betterment far out beyond the range of legislation.

All of this is doubtless obvious enough. But the real difficulties of the situation often arise in this country from the multifarious requirements of our many states. Foreigners who seek to report fairly concerning education and the professions in this country often find themselves baffled by the diversities which the requirements of the several states present. Now, we do not think it necessary to apologize for the independence of action which our American states enjoy. We have faith in the American form of government. We would even go to the length of believing confidently that the very diversity and lack of coherence which the states display, in their regulation of the practice of the several professions and in many other particulars, bears in it the promise of unusually rich developments within these several fields. We have no desire for enforced uniformities in these matters. But we do wish to see the inherent advantages of the American system fully realized.

A certain loss of prestige we have certainly suffered in the estimation of the civilized world because we have not been able to present a united front and to show that high professional requirements are everywhere maintained and enforced in these United States. Our physicians and dentists, who seek in considerable numbers to engage in professional practice in foreign countries, still suffer material disadvantage because of such conditions. The files of the Department of State at Washington contain appeals for action to relieve this situation. And the cases are innumerable in which our own citizens, who merely pass from one state to another in the home land, suffer serious inconvenience and even personal loss because of incongruous requirements touching their professional training. Yet even in the face of these facts, we do not say to our critics, "Yes, the system is wrong and should be replaced by a better." We may say instead, "Our system is not yet working smoothly, so far as these interests are concerned. But it has within itself the remedy for these evils, and even now it is on the way to better things than a purely centralized system could hope to accomplish."

We have here some fifty experiment stations for trying out all manner of regulations, and selecting those which shall prove to be best, with due regard for incidental variations to meet local and sectional needs. We are now engaged in the trying out. We have hardly begun as yet to scrutinize the results of our fifty experiments and determined which plan of all is best. We shall not stop even at that, but when our comparative studies have yielded their full result they will have shown what is best as regards both unity and diversity. They will have taught us concerning the things in which the several states may profitably act in unison, and also concerning the things in which, without conflict or disharmony, they may profitably act on independent lines.

EFFORTS TOWARD UNIFORMITY

From this point of view, the study of comparative legislation and administration looms large in the near future. A national policy, as regards educational and professional standards, does not depend on federal action alone. It may be determined, and quite as effectively, through free cooperation of the several states—the chief rôle of the federal government in this case being to promote the needed cooperation.

This mode of governmental procedure in the United States was definitely launched by the assembling of the first Conference of Governors, at the White House, in 1908. Some weeks before that conference was held the state superintendents of public instruction had held their first conference, also in the City of Washington. During the first week in March, 1910, at Indianapolis, the state officers of education will hold their fourth conference. The topic which they will have under discussion will be "Desirable Uniformity and Desirable Diversity in the Educational Legislation of the Several States."

What has thus far been said points, I think, to this conclusion: That the time has come for a new effort to secure concerted action on the part of the several states touching professional and educational standards, and that professional and educational bodies should work in unison to that end.

A fresh evidence that men are turning to the thought of uniform legislation has recently appeared in the action of the National Civic Federation, which is entering on a general campaign in behalf of uniformity. Many other indications point in the same direction.

Let me emphasize again the fact that I am not in love with governmental uniformity, for its own sake. It is unity in variety which most appeals to me. But I think we have now pushed variety far in advance of unity. It is in the interest of a just balance that we should hereafter endeavor to give to unity its fair chance of realization.

Consider, for example, a single instance, in which educators and other professional men are equally interested, the appalling diversity as regards our standards in higher education, particularly as represented by requirements for the bachelor's degree. A pioneering work of incalculable value has been performed by the Carnegie Foundation, in setting a mark below which collegiate institutions may not fall without bringing their educational standing into question. It would be hard to overestimate the value of this service. But the American people will not rest with a condition under which its collegiate standards, and even its standards in secondary education, are determined by an institution under purely private control. The greatest work of the Carnegie Foundation is to be that of calling public attention to the need of radical improvement at this point in our educational system. It has called up questions which must eventually be dealt with by the educational establishments of the several states, backed by legislative authority.

It is of the greatest moment that hasty and ill-advised action touching such vital and difficult questions shall not be taken by the state authorities. The responsibility for definitive action rests with them. Such action should

PELLAGRA: TRANSFUSION IN ELEVEN CASES

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be taken in any given state only after full consideration of whatever related action may be under way in other states, and full consideration of the matured judgment of educational and professional bodies representing the country at large.

COOPERATION OF MEDICAL AND GENERAL EDUCATION

The Council on Medical Education stands at a focal point in this undertaking. It represents fundamental interests of our people, outside of the purely academic field. On the other hand, every step that it may take depends on educational conditions. Educational and professional concerns, indeed, are so closely bound together that professional societies, and particularly those having to do with medical affairs, should be found working in close accord with the great body of educational workers. Such cooperation is for the good of both. It is also for the good of those overshadowing public interests which are served alike by teachers and physicians.

NEW HOPE IN UNITED EFFORTS

With full cooperation between the educational and the professional forces of this country, we may enter with new hope on the old campaign for high and consistent standards. It would give point to this new cooperative effort if the Council on Medical Education might be represented at the Conference of State Superintendents of Public Instruction. Inasmuch as the Conference meets on the call of the Commissioner of Education, I may venture to extend to you a cordial invitation to be so represented.

Medical education must be grounded in the general system of education. It will come to its best only when it can rest on a sound and ample system of secondary schools and be backed against the scientific and literary greatness of a true university. Our educational leaders, on the other hand, will be nerved up to their best endeavors when they see clearly the connection between their scholastic undertakings and those technical and professional pursuits through which education comes into its most direct service of the public good.

The combination of these related interests broadens out into the widest reaches of practical patriotism. Education and medicine are to be fellow-servants in much of the great work of the coming civilization. Together they are to increase our prestige and influence abroad as well as our happiness at home. In more ways than have yet been worked out they are to be a strong support of our federal government in assuring to this nation its rightful place and influence among the nations of the earth. That the representatives of these two great national interests, many of whom are educators and physicians, both in one—that they shall together see both sides of this problem with which the Council on Medical Education is dealing, and shall together work for the great ends which you have proposed, is a consummation, not too great to be hoped for, but one to be furthered by every means within our power.

Value of Disease Statistics.—It is only by a separation of the severe from the milder cases, together with a detailed report of each case on which statistics are based that an adequate comparison between the clinical and the laboratory findings can be made. The mere publication of numbers cannot further the study of abdominal inflammation unless accompanied by exact data. Such articles can be regarded merely as expressions of opinion and are of no great value as evidence to workers in surgical science.—A. E. Hertzler, in *New York Medical Journal.*

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Confining ourselves to a consideration of the theories, experiments and facts bearing on the nature and action of the toxic substances of pellagra, no matter what be their origin, we suggest the possibility of combating these toxins *in vivo* by antagonistic substances existing in the body as the result of a natural or acquired immunity.

As evidence of the existence of specific toxic and antitoxic bodies the following facts may be noted:

Tizzoni[1] has produced typical pellagrous symptoms in animals by injection of pellagrous human blood.

Lombroso[2] claims to have produced typical pellagrous manifestations by the administration of an alcoholic extract of impure maize by mouth.

Babes[3] and other workers have found in the serum of pellagrins a substance antagonistic to extracts of damaged maize, that is a specific antibody.

Giovanni and Gatti,[4] from their work on pellagrous serum, conclude that the serum of pellagrins has a hemolytic action much above normal, suggesting the presence of an antibody. They further claim to have demonstrated precipitative properties in pellagrous blood. D'Ormea, working independently, likewise concludes that there is a definite specific antibody developed in pellagrins.

Antonini and Marianni[5] claim that a definite immunity is developed in cured pellagrins and that the serum exhibits specific antitoxic action against the maize poisons. They have developed an artificial immunity in rats, rabbits and goats against pellagrous toxins. Finally, they conclude that a serum therapy can be instituted in grave pellagra cases.

The work of these investigators warrants the following belief:

1. Pellagra is an intoxication, the toxic principles existing in the blood of pellagrins.

2. The production of pellagrous symptoms by the injection of blood from pellagrins, the definite precipitative, hemolytic and antitoxic action of the serum, the artificial immunity produced in animals and the immunity acquired in patients recovered from pellagra, are all suggestive of a serum treatment as the solution of the pellagra problem.

The curative value of pellagrous serum in man has been tried by Antonini and Marianni,[6] who, using the serum of recently recovered typhoid pellagrins, noted cures in several instances. Their work was most carefully performed, the potency of the serum being tested on animals before its hypodermic administration to patients. Lombroso, in a personal communication to us, commenting on the work of these investigators, states that he believes that serum injection is of undoubted value in the treatment of pellagra.

Transfusion of blood from a recovered pellagrin would possess all the curative properties exhibited by the serum alone, as administered hypodermatically, and in addition would tend to improve the anemia in the severe cases.

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1. Tizzoni: Quoted by Wood in THE JOURNAL A. M. A., July 24, 1909, liii, 274.
2. Lombroso: Quoted by Watson in New York Med. Jour., May 8, 1909.
3. Babes: Quoted by Lavinder in Pellagra; a Précis, Rep. P. H. and M.-H. S., 1907.
4. Giovanni and Gatti: Richerche sulle proprietà emolitiche e citoprecipitante del siero de sangue de pellagroso, 1909.
5, 6. Antonini and Marianni: Contributo allo studio dello sieroterapia nella pellagra, 1904.

In many of the cases transfused we have been unable to obtain donors recovered from pellagra. In these cases we have selected relatives who have lived on the same diet and in the same environment, in this way hoping to find donors who possess a certain degree of natural immunity.

Transfusion has been resorted to only in patients resisting all forms of medical aid. The operation has been done in all instances as a last resort. Several of the patients were apparently in the last stages of the disease. The high mortality rate in the patients so far transfused, we can but feel, is largely due to the fact that many of the patients operated on were in a practically hopeless condition at the time of operation. We believe that earlier operation will give decidedly better results than those so far obtained.

None of the patients who recovered received any post-operative medical treatment other than a gastric tonic and occasionally carbonate of iron. Most careful attention has been given to the post-operative diet in all the cases. The operation of transfusion consists in uniting the radial artery of one individual to any forearm vein of the patient, either by the suture method of Carrel or the cannula method of Crile, and allowing the blood to flow from the first to the second person. This is, at best, a delicate operation and should be performed with a full knowledge of the dangers to both the donor and the recipient.

The dangers to the recipient are (1) transmission of disease, (2) hemolysis, (3) agglutination, (4) acute dilatation of the right heart. These conditions are guarded against by careful selection of the donor and by careful test-tube experiments for hemolysis and agglutination. At the operation careful observation of the recipient's pulse and general condition ward off acute dilatation of the heart. Postural treatment together with bleeding are of value in treating the condition when present.

The rate of blood-flow is controlled by means of rubber-covered clamps and the fingers. This, with careful observation of the donor's blood-pressure and pulse, control the sole danger to the donor, that of exsanguination.

There are many small factors on which the success of the operation depends. Only repeated experimentation on animals would justify one in attempting the procedure on human beings. Without technical knowledge of the operation and without careful selection of the cases this procedure will surely fall into an undeserved ill repute.

The first transfusion performed in pellagra[7] was performed on Aug. 3, 1908, through the kindness and assistance of Drs. McCafferty and Tisdale at Mt. Vernon, Ala. The result was so suggestive that other patients were transfused. We present the short histories of 11 cases in which transfusion was employed.

CASE 1.—The patient, a negress, aged 25, had acute pellagra of three weeks' duration. At examination she presented a marked stomatitis, profuse diarrhea, and incontinence of feces. Nourishment had been practically *nil* for several days because of gastro-intestinal condition. There was a characteristic pellagrous rash over arms and hands, face and legs, and marked emaciation and asthenia. Hemoglobin was 70 per cent. The patient was *in extremis* at time of operation (August 3, 1908, Mount Vernon, Ala.); pulse 140. Transfusion was performed from a young negress who recovered from a definite attack of pellagra one year before. The patient made a remarkable recovery, the skin lesions rapidly disappearing, the stomatitis improving and a marked increase in weight and general condition ensuing in the first week. Within a week the patient was up and about the ward. She went on to recovery and has had no relapse; it is now nineteen months since the operation. Strangely enough, the donor developed an attack of pellagra a few months ago and succumbed. The results in this case were so suggestive as to warrant further trials of the procedure.

CASE 2.—The patient, a white woman, aged 22, referred by D. D. Armstead, Campbell, Ala., with chronic pellagra of four years' duration, had had attacks of stomatitis, indigestion and diarrhea of six months' duration every spring for the last four years. Fourteen months before coming under observation she had had a cutaneous eruption over the backs of both hands, and in the past few weeks marked mental and nervous symptoms, increasing in severity, and sensory symptoms of head and feet. At examination she was found to be markedly emaciated; weight 60 pounds, average weight over 100 pounds. Asthenia was marked. There was a pellagrous eruption over the backs of both arms and hands. Asthenia was marked. There was a pellagrous eruption over the backs of both arms and hands. Stomatitis, diarrhea, and marked mental symptoms (those of depressive melancholia) were present; reflexes increased. Pulse-rate was out of proportion to the temperature; hemoglobin, 70 per cent. Transfusion was performed July 3, 1909, at Mobile, Ala. The donor had never had pellagra. Four days after the operation the skin lesions began to desquamate, the nervous and mental symptoms rapidly disappeared. Within a week the diarrhea had disappeared. The patient gained 8½ pounds in the first ten days. She went on to recovery and has had no signs of relapse. It is now over eight months since the operation.

CASE 3.—The patient, a woman, referred by Dr. P. A. Trice of Morvin, Ala., had chronic pellagra. One year before coming under observation she had an attack of diarrhea lasting six months. There was a history of pellagrous eruption, marked asthenia, emaciation and pronounced nervous symptoms at that time, but no mental symptoms. At examination the patient presented signs of the old eruption, increased reflexes, asthenia, nervous excitability and anemia. Hemoglobin was 70 per cent. The patient had lost 30 to 40 pounds in weight. Transfusion was performed at Morvin, Ala., on July 18, 1909. The donor had never had pellagra. Three days after the operation the patient showed definite signs of improvement. Twelve weeks afterward, she had gained 15 pounds, the anemia was much improved and she stated that she felt stronger than in three years. She went on to a perfect recovery and has had no relapse; it is now eight months since the operation.

CASE 4.—The patient, referred by Drs. Hand and Bailey, Demopolis, Ala., had acute pellagra. Pellagrous erythema developed over the backs of both hands six weeks before the patient came under our observation, and spread to forearms, elbows, sides of neck and face. There was marked stomatitis, asthenia, emaciation and anemia. The stomatitis and diarrhea had been so severe as to interfere seriously with feeding in the past three days. At examination, the patient was seen to be markedly wasted, the eruption present as above, a deeply pigmented mask now extending over the entire face. The lips were ulcerated, a swollen and blackened tongue protruded, and from the mouth drooled forth a slimy, fetid discharge. The patient was in a moribund condition. Hemoglobin was 60 per cent. Pulse was 160. Transfusion was considered practically useless, but was performed July 11, 1909, at Demopolis, Ala. The first donor had recently recovered from an attack of pellagra. On account of the weakened condition of the donor this transfusion was ended in the first fifteen minutes. Transfusion was then reestablished from the husband, who had never had pellagra. There were some symptoms of acute dilatation of the right heart in the patient. This patient died three hours after the operation, the condition not improving after the operation. The prolonged operation may have had some influence on the early death, though death was but a matter of a few hours otherwise.

CASE 5.—The patient, a white woman, aged 53, referred by Dr. Bondurant, Mobile, Ala., with chronic pellagra, had had persistent diarrhea for two years; and one year before coming under our observation, a pellagrous eruption over the backs of

7. Cole: The Transfusion of Blood as a Therapeutic Agent with Report of Transfusion in a Case of Pellagra, Southern Med. Jour., April, 1909, p. 631.

both hands. The eruption reappeared six months later. A few weeks before operation the patient developed marked mental and nervous symptoms, sensory symptoms in the head and feet. At examination she was found markedly emaciated; a desquamating skin lesion was present over both hands and forearms. Constant involuntary muscular tremors, low muttering delirium and at times hallucinations were present, with asthenia and increased reflexes. Hemoglobin was 60 per cent.; weight 70 pounds; average weight over 100 pounds. Transfusion was performed July 17, 1909. The donor had never had pellagra. Within twenty-four hours the nervous and mental condition was markedly improved. The patient rapidly improved, gaining 8½ pounds the first week and 34 pounds in the first eleven weeks after the operation and is still gaining. Every symptom of pellagra has disappeared; the mental condition is perfect. There has been no recurrence. Strangely enough, the patient has no recollection of several weeks of her illness during which time the transfusion was performed.

CASE 6.—The patient, a white woman, aged 50, referred by Dr. Sarah A. Castle, Meridian, Miss., with chronic pellagra, had had several attacks of persistent diarrhea for the past two years. Four months before coming under observation the patient had a severe attack of diarrhea followed by a severe stomatitis. Four weeks before examination a pellagrous eruption appeared over the hands and spread to the forearm, face and legs. There had been marked nervous and mental symptoms for the past six weeks. This approached acute delirium at times. Sensory symptoms at times were severe. At examination the patient was found to be markedly emaciated, asthenic, with desquamating skin lesion over the arms, face and legs. There was incontinence of stools, a marked stomatitis and a fetid, drooling discharge from the mouth. Transfusion was performed at Meridian, Miss., on July 22, 1909. The donor was an arteriosclerotic individual. The marked atheroma of the donor's radial artery prevented a successful anastomosis. Little if any blood was transfused at this time. The patient showed no signs of improvement and was again transfused, Aug. 17, 1909. The donor employed at the second operation had recovered from a definite attack of pellagra two years before. There was no definite sign of improvement and the patient died four weeks after the second transfusion. A successful anastomosis at the first operation might have resulted in improvement, though the patient was in a very serious condition even at that time.

CASE 7.—The patient was a white man, aged 30, referred by Dr. J. L. Bryan, Greenville, Ala., with chronic pellagra. Six months before examination the patient had a severe and persistent diarrhea and developed a pellagrous eruption over the hands and forearms. On examination the patient was found to be profoundly emaciated, with pronounced nervous and sensory symptoms; the reflexes were increased. The diarrhea and stomatitis, while still present, were not severe at this time. There was a desquamating skin lesion over the backs of both hands and forearms. Hemoglobin was 60 per cent. Transfusion was performed July 25, 1909, at Greenville, Ala. The donor was a restless 14-year-old boy. The anastomosis was not entirely successful owing to the restlessness of the donor and the operative surroundings. The operation was attempted by the light of a single oil lamp. Very little blood was transfused. The patient showed no signs of improvement and died twenty-six days after the operation.

CASE 8.—The patient, a white woman, aged 30, referred by Dr. Armstead, Nanafalia, Ala., with chronic pellagra, had had a severe attack of pellagra one year before examination, with diarrhea, stomatitis, marked mental and nervous symptoms; duration two months. Three weeks before examination a pellagrous eruption developed over the backs of both hands and wrists. A severe stomatitis developed and there was marked exacerbation of the mental symptoms. At examination stomatitis, diarrhea, pellagrous eruption, increased reflexes, severe mental symptoms, and a severe degree of emaciation were present. Hemoglobin was 70 per cent. Transfusion was done July 24, at Mobile, Ala. The donor never had had pellagra. Within twenty-four hours the patient showed marked improvement in mental condition. The eruption, diarrhea and nervous symptoms rapidly disappeared. She gained 20 pounds in ten weeks and at that time stated that she felt better than she had in five years. The patient made an uninterrupted recovery and has had no return. It is now eight months since the operation.

CASE 9.—The patient, a white woman, aged 36, referred by Dr. McMillan, Jones Mills, Ala., with chronic pellagra, had had severe attacks of diarrhea every spring for six years. Eighteen months before coming under our observation the patient developed a pellagrous eruption over the backs of both hands, associated with stomatitis. Four months before examination there was another attack of severe diarrhea associated with stomatitis and marked mental symptoms. Four weeks before examination the diarrhea and stomatitis reappeared, and the mental and nervous symptoms became exaggerated to a mild form of dementia. On examination the patient presented a desquamating skin lesion over the backs of both hands and forearms. There were asthenia, marked emaciation and anemia. Reflexes were increased; mental depression and at times hallucinations were present. Weight was 74 pounds; average weight over 100 pounds; hemoglobin, 70 per cent. Transfusion was done Oct. 18, 1909. The donor had never had pellagra. Twenty-four hours after the operation the patient showed marked improvement in the mental condition. The symptoms of pellagra rapidly disappeared and the patient gained 7½ pounds in the first week. The patient went on to a perfect recovery and has constantly gained in weight. There have been no return of pellagra symptoms; it is now four months since the operation.

CASE 10.—The patient, a white woman, aged 43, referred by Dr. Eley, Merrill, Miss., with acute pellagra, had had an acute attack of diarrhea two months before coming under our observation; this proved intractable and was soon followed by stomatitis and a pellagrous eruption over the backs of both hands. There was a progressive emaciation and anemia. The eruption spread to the face. Severe mental symptoms developed ten days before examination. On examination the patient was found to be profoundly emaciated. An eruption extended over the backs of both arms and hands. Stomatitis, mental depression and delirium were present. The reflexes were increased; there was a severe diarrhea. Hemoglobin was 60 per cent. Transfusion was performed Nov. 3, 1909. The donor had never had pellagra. Although there was a good flow of blood there were no signs of improvement and the patient died seven days after the operation.

CASE 11.—The patient, a white woman, aged 51, referred by Dr. Haley, Houston, Texas, with chronic pellagra, had complained of indigestion eight months before the operation. There was progressive loss of weight, profuse diarrhea, and anemia. Hemoglobin was 60 per cent. three months before the operation. Four months before coming under observation a stomatitis appeared. Shortly afterward a pellagrous eruption appeared over the backs of the hands. At this time there was a profuse diarrhea. The mental condition was that of a depressive melancholia. Reflexes were increased. At examination, marked emaciation, asthenia, increased reflexes a depressive melancholia, signs of myocarditis, and remains of a pellagrous eruption were present. Hemoglobin was 60 per cent. Transfusion was performed Dec. 22, 1909, at Houston, Texas. The donor had never had pellagra. Although there was a good transfusion of blood the patient showed no signs of improvement and died nine days after the operation.

CONCLUSIONS

1. In certain severe cases of pellagra resisting all forms of medical treatment, transfusion has been followed by recovery with no relapse.

2. The patients recovering showed marked improvement from the first; in the fatal cases there was no benefit from transfusion.

3. Transfusion is of undoubted value in certain severe and apparently hopeless cases, but without a thorough knowledge of the technic of transfusion and without a careful selection of the cases and donors it will be brought into an undeserved ill repute.

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ANIMAL EXPERIMENTATION IN RELATION TO PROTOZOAN TROPICAL DISEASES*

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The investigations of Pasteur[1] proving that the disease of silkworms known as pebrine is due to infection by a living agent had the immediate practical result of restoring the languishing silk industry of France and Southern Europe, and also produced the greatest interest by the demonstration that disease can be produced in animals by infection with a microbe. The fact that the infectious agent is a protozoon received little attention, and for many years following Pasteur's discovery bacteria furnished the main object of medical investigation; only recently have numerous researches begun to reveal the frequency with which protozoa occur as parasites in man and the lower animals.

But if the expansion of the subject of parasitic protozoology is recent, the recognition of the tropical diseases, as a separate group, is even newer, and, in spite of the extremely rapid growth of our knowledge of these diseases, we must still regard the subject as relatively undeveloped. This being the case, the results obtained from experiments and investigations in tropical protozoology are to be regarded as hardly more than foreshadowing what may be expected from further research.

ANIMAL STUDY UNAVOIDABLE

In considering the part played by animals in the development of our knowledge of tropical diseases of protozoan origin, several lines of thought present themselves. In the first place, the parasites causing these diseases are themselves members of the animal kingdom, and the study of any of them involves a measure of animal experimentation. In the second place, in many instances the protozoan parasites causing diseases are carried from one individual to another by insects. The study of the insect carriers of disease and of the life history of the parasite in the insect again involves a certain sort of animal experimentation, the insect being the subject of experiment. Furthermore, most of our information concerning the protozoan parasites has been acquired from studies of protozoa spontaneously infecting the lower animals, and studies of these infected animals may be classed as animal experimentation. Finally, laboratory inoculations of protozoa into healthy animals have been made with varying success. This article will deal mainly with the two last-mentioned groups of animal studies, but it will be necessary to include clinical and zoologic researches in order to give a connected account of the progress in our knowledge.

The tropical protozoan diseases have become recognized as a group only after many independent and apparently unrelated studies. The circuitous course of these studies may be suggested by mentioning a few of the important ones, such as those of Pasteur, in France, on pebrine; of Lösch, in Russia, and Kartulis, in Egypt, on amebic dysentery; of Laveran, in Africa, on malaria; of Smith and Kilborne, in the United States, on ticks as carriers of Texas fever; of Evans, in India, and Bruce, in Africa, on trypanosomiasis in animals; of Ross, in India, on the transmission of malaria by mosquitoes; of Dutton and Todd, in Africa, on sleeping sickness, and of Schaudinn, on the identification and properties of numerous protozoa.

AMEBIC DYSENTERY

The principal facts relating to amebic dysentery with which we are acquainted have been learned from clinical and pathologic studies. Owing to the difficulties encountered in growing the amebas and in reproducing the disease in lower animals in a manner which excludes the possible action of bacteria, there are a few who still find room for doubt as to the exact relation of amebas to human disease, although most authorities accept it as proved that at least one type of ameba produces dysentery in human beings.

Lambl observed amebas in human fecal matter, but they were not regarded as pathogenic until Lösch[2] described the ameba and the disease now known as amebic dysentery. After administering amebic discharges to four dogs, by mouth and rectum, Lösch found amebas in the stools of one of them, in whose rectum also there were numerous amebas accompanying inflammatory and ulcerative changes. Lösch could not assign a specific etiologic rôle to the amebas, but thought it probable that they played a secondary part in producing the disease. The intestinal bacteria complicated the experiments, which were all the more difficult, since the amebas could not be grown in pure culture and their specific action be observed.

Clinical and pathologic reports, such as those of Osler,[3] Stengel, Musser, Dock, and Councilman and Lafleur,[4] established amebic dysentery as a clinical entity, but amebas were nevertheless frequently found in the stools of persons free from any symptoms of dysentery. Kartulis,[5] stimulated by certain observations made during Koch's cholera expedition to Egypt, made a careful study of the dysenteric conditions in Alexandria. From a study of over 500 cases, he concluded that amebas are responsible for a characteristic form of dysentery, and that they are also the cause of the liver abscesses often complicating the disease. Kartulis did not succeed in his early attempts to produce experimental amebic dysentery in monkeys, cats, dogs, rabbits and guinea-pigs, but later produced typical forms of the disease by giving to young cats rectal injections of amebic discharges. He also claims that he grew amebas from liver abscesses in pure cultures in straw infusion, and with these cultures successfully inoculated cats, the animals dying from a typical amebic dysentery. Inoculation with bacteria and with dysenteric stools freed from amebas never caused dysentery in his experimental animals. No other experimenters have been able, however, to repeat Kartulis' experiment of growing amebas in pure culture, although Kruse and Pasquale have produced dysentery by injections of ameba-containing pus from liver abscesses.

MODE OF INFECTION

Although human beings probably never receive infection through the rectum, Kartulis' experiments at least placed the subject on a more substantial basis, and subsequent experiments have shown that amebic dysentery can result after swallowing amebas. The ordinary, free and unprotected amebas fail to produce the disease after being swallowed, as they are destroyed in the upper part

* This article is one of a series issued in pamphlet form by the Council on Defense of Medical Research of the American Medical Association for circulation among the public. Twelve of these pamphlets are now ready, taking up the relations of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, rabies, internal secretions, surgery, protozoan tropical diseases, etc.

1. Pasteur, L.: Rapport, etc., relativement a la maladie de vers à soie, Paris, 1868; Pasteur, L.: Etude sur la maladie de vers à soie, Paris, 1870

2. Lösch: Virchows Arch. f. path. Anat., 1875, xlv, 196.
3. Osler: Bull. Johns Hopkins Hosp., 1889, i.
4. Councilman and Lafleur: Johns Hopkins Hosp. Rep., 1891, ii.
5. Kartulis: Centralbl. f. Bakteriol., 1891, ix, 365.

of the digestive tract by the digestive juices. Under certain conditions, however, the amebas become encased in cysts, which protect them from the digestive juices and other injurious agents. In this encysted condition amebas can pass through the stomach and upper intestine unharmed, and on arriving at the lower part of the intestine can grow out into the usual free form and give rise to amebic dysentery. That encysted amebas taken by mouth can set up amebic dysentery was shown, in the case of human beings, by Calandruccio, and, in the case of animals, by Quincke and Roos,[6] Kruse and Pasquale,[7] H. F. Harris,[8] Jürgens,[9] Musgrave and Clegg,[10] and others. As a further proof of the specific action of amebas, Harris, in dogs, and Marchoux,[11] in cats, which survived the infection for fifteen or sixteen days, observed the development of liver abscesses—a very dangerous and characteristic complication met with in human beings suffering from chronic dysentery.

Although clinical and pathologic observations and the experiments referred to would seem to establish the fact that the ameba is a disease-producing agent, the question was far from being closed. Many experimenters failed to confirm the results just outlined, and in addition the conditions of some of the experiments were too severe to make the positive cases convincing. Moreover, forms of infectious dysentery occur in which amebas are not present. Light was thrown on this group of cases by Shiga's demonstration of a bacillus as the cause of numerous cases of epidemic dysentery. The widespread occurrence of dysenteries of bacterial origin has been shown by reports of Flexner, Strong, Lentz, Kruse and many other writers all over the world.

Again, it has been found that amebas are frequently present in the stools of persons who have no symptoms of dysentery; Schaudinn finding them in the stools of from 20 to 66 per cent. of non-dysenteric persons. This has led to the view that there are various kinds of amebas, or that there is at least one pathogenic ameba and at least one harmless type. Most writers hold to the view that there are at least two types, and, while many believe that the types can be differentiated by their microscopic appearance,[12] Musgrave and Clegg maintain, as the result of their experiments, that there is no ready means of distinguishing harmless amebas from those that produce disease, and intimate that all amebas are pathogenic. Schaudinn[13] has helped to clear up the situation by showing that there are at least two types of intestinal amebas, distinguished by differences in their manner of growth and reproduction, and his classification and conclusions based on the differences in the life of the two amebas are the ones generally accepted at the present day.

FURTHER STUDY OF AMEBAS

The anatomic changes produced by amebas have been studied in man, but the early and significant stages of the diseases can be seen only in experimental animals. The manner in which the amebas penetrate into the intestinal glands and lead to destruction of the tissues has been described by Jürgens, Quincke and Roos, H. F. Harris and Kruse and Pasquale.

While studies on man and animals indicate that the ameba produces a dangerous disease, there are still many problems remaining unsolved. The conclusions of Schaudinn must be confirmed; the various pathologic and non-pathologic conditions in which amebas occur need further study; although amebas have been found in the mouth and in abscesses of the jaw, and spontaneous amebic disease has been found in animals (Strong), the characteristics of these parasites and the number of species of pathogenic amebas should be established. We know very little at present of methods of protection against this infection and very little of the life of parasitic amebas outside of the body. In the elucidation of such problems—all connected with the welfare of human beings—animal experimentation will almost certainly be necessary.

TEXAS FEVER AND ALLIED DISEASES

In 1891-2 Smith and Kilborne[14] discovered and proved that Texas fever, a destructive disease of cattle, is due to infection of the blood by a minute pear-shaped parasite, often occurring two by two in the blood corpuscles, and named by them *Pyrosoma bigeminum*.[15] Smith and Kilborne performed a work of epochal importance. Not only did they discover the cause of Texas fever, but they explained how it happened that the disease was spreading gradually northward over an ever-widening area. At a time when the relation of insects to disease was hardly suspected, they proved that the parasite of Texas fever is taken up by ticks which bite the diseased animal. The tick, when gorged with blood, drops off and lays an enormous number of eggs which harbor the infection. The eggs develop into young forms of tick, which die unless a chance is offered to suck blood. If the larval ticks have a chance to feed on cattle which have come from a region free from Texas fever, the disease is transmitted to the cattle. It was through the agency of infected ticks' eggs that Texas fever was slowly being carried northward over the country. This series of experiments furnished the first proof that blood-drawing vermin, such as ticks, can be carriers of a microbic disease, and thereby brought to light a method of infection hardly dreamed of previously, but now known to be characteristic of a large group of protozoan diseases.

Several other diseases caused by parasites of this genus have been discovered in sheep, in dogs, in horses, in rats, in monkeys, in goats and asses, and a similar disease in man has been described. A great many experiments have been undertaken with the parasites of these diseases in attempts to gain a clear knowledge of the different stages in their development and of the peculiar mechanism by which the diseases are spread, but the problems have not yet been thoroughly elucidated.[16] These parasites have been grown by Miyajima[17] and Martini;[18] nevertheless their characteristics must be studied in the living body, and it is clear that progress in understanding diseases of this type and in combating them cannot be expected except through the employment of animal experimentation. Without referring to the direct bearing of Smith

6. Quincke and Roos: Berl. klin. Wchnschr., 1893, xxx, 1089.
7. Kruse and Pasquale: Ztschr. f. Hyg. u. Infectionskrankh., 1894, xvi, 142.
8. Harris, H. F.: Virchow's Arch. f. path. Anat., 1901, lxvi, 67.
9. Jürgens: Ztschr. f. exp. path. u. Therap., 1907, iv, 769.
10. Musgrave and Clegg: Pub. of the Bureau Govt. Lab., Bioi. Lab., Manila, P. I., 1904, No. 18; Musgrave and Clegg: Philippine Jour. Sc., November, 1906, i, 909-950. [Musgrave and Clegg have found that amebas can be grown in cultures, if suitable bacteria are growing on the same culture media. They obtained growths of amebas from raw vegetables, water, and dysenteric discharges, and report that they produced abscesses and various amebic infections with cultures from all sources.]
11. Marchoux: Ann. d'hyg. et de méd. coloniales, 1900, iii, 129.
12. Craig: Jour. Infec. Dis., 1908, v, 324.
13. Schaudinn: Arb. a. d. k. Gsndhtsamte., 1903, xix, 547.
14. Smith and Kilborne: 8th and 9th Ann. Rep. of Bur. An. Indust. U. S. Dept. Agric., 1891, 1892, pp. 177-305.
15. There has been much discussion over the name of this parasite. It is most widely known as *Piroplasma bigeminum*, but it is now claimed that according to the rules of nomenclature, *Babesia bovis* displaces the name given by Smith.
16. The recent works on this subject are excellently reviewed in Calkins' Protozoology, 1909.
17. Miyajima: Philippine Jour. Sc., Sec. B, May, 1907, No. 2, ii, 83.
18. Martini: Philippine Jour. Sc., Sec. B, June, 1909, No. 3, iv, 147.

and Kilborne's experiments on the cattle-raising industry, it may be pointed out that their work furnished a clue of crucial importance in a flood of investigations on other diseases, which already have been, literally, of inestimable value to human welfare.

MALARIA AND ALLIED DISEASES

In order to gain any conception of the immense change that has been brought about by studies on malaria it is necessary for us to contrast the prevalence of the disease to-day with that of twenty-five or thirty years ago, and to take note particularly of the attitude of mind which commonly prevailed in regard to it. The present improved state of affairs, in which malaria is being successfully combated and has been made a preventable disease, is the outcome of protracted studies of apparently disconnected matters, such as microscopic studies of the blood of malarial patients; inoculation experiments on animals, and even on man; the study of blood diseases in birds, field mice and other animals; the study of the classification, anatomy, distribution, habits, breeding-places and life-histories of mosquitoes. From such varied sources contributions have accumulated until most of the former mysteries connected with malaria have disappeared, and there are now few diseases concerning whose origin and spread we have such clear knowledge.

LAVERAN'S DISCOVERY OF PARASITES

When Laveran[19] first described the malarial parasites, in 1880, the attention of the medical world was beginning to focus on bacteria as disease-producing agents, and it was several years before the importance of Laveran's discovery was recognized and its accuracy established. However, the work of the Italians, led by Marchiafava and Celli and Grassi, and of American clinicians such as Osler and Thayer, soon placed beyond question the fact that the bodies described by Laveran are parasites and that they are present in the red-blood corpuscles of patients suffering from malaria. In the flood of investigations made on the blood of malarial patients, it was soon learned that healthy human beings can be infected by inoculating them with malarial blood,[20] and that there are several types of malarial parasite, producing different effects in man. One, the parasite of tertian malaria, causes chills every other day; a second causes chills at 72-hour intervals (quartan malaria); a third causes irregular chills and is responsible for what is known as pernicious or tropical malaria. These types can be distinguished from each other by microscopic examinations.

LIFE CYCLE OF PARASITE

Golgi,[21] during 1885-6, traced the stages in the growth of the quartan and tertian parasites from the time that the minute form enters the red-blood corpuscles, through different periods of development, up to maturity, when the full-grown form divides into segments, each of which enters a fresh red corpuscle to repeat the process. He showed that the malarial chill corresponds to the time when one generation of full-grown parasites is simultaneously segmenting. In 1891 Marchiafava and Celli made a similar study of pernicious malaria. About this time Danilewsky[22] investigated a number of warm-blooded and cold-blooded animals and found several kinds of blood parasites, among them one in birds which resembles that of human malaria.

MOSQUITO AS A CARRIER

The works referred to established a relationship between the parasite found in the blood of human beings and the disease, and the occurrence of a similar parasite in birds, but there was no clue to indicate where the parasite came from nor how it got into the blood, nor was there any generally accepted explanation of the mode of infection.[20] It is true that Laveran supposed that the mosquito was concerned in some way in this transfer, and that this idea occurred independently to Manson, who had found mosquitoes active in the spread of a blood disease caused by a minute parasitic worm (*Filaria bancrofti*).[23] Manson suggested that the malarial parasites were carried by mosquitoes from malarial patients; that the mosquitoes infected drinking-water, which in turn carried the parasite to susceptible persons. Bignami also supposed that the malarial organism passed part of its life in the external world, where mosquitoes in some way picked it up and inoculated the human being in the act of biting him. The mosquito hypothesis, however, lacked support until 1895, when Major Ronald Ross,[24] a medical officer in the Anglo-Indian service, observed that the malarial parasites, taken from a patient into the stomach of a mosquito, underwent interesting changes, with the production of flagellated and spherical forms, which were subsequently found by MacCallum[25] to be sexual forms of the protozoon. In many attempts to continue the study Ross failed until he employed a special type of mosquito, now known to be the *Anopheles*, with which he confirmed his previous finding. Directing his attention to bird malaria, Ross discovered that if certain types of mosquitoes suck blood from infected birds, the parasite, *proteosoma*, enters the mosquito, passes through an elaborate cycle of changes, and after about 9 days develops into forms which accumulate about the proboscis of the mosquito and are discharged into the next bird attacked by the insect, to reproduce the disease afresh. Ross succeeded by this means in infecting healthy birds.

The bearing of Ross' discovery on the problem of human malaria was apparent, and immediately the study was taken up by the Italian workers who proved that the mosquito plays the same rôle in this disease as in bird malaria. In arriving at this result, the study of malarial diseases of field mice and lower animals and a painstaking study of mosquitoes by Grassi, played a part. The chief workers among the Italians were Grassi, Bignami and Bastianelli.[26]

CYCLES OF GROWTH AND REPRODUCTION

From these investigations it developed that the malarial parasites have two cycles of growth and reproduction: in the warm-blooded animal reproduction is asexual; in the mosquito sexual reproduction occurs. Both cycles are necessary for the perpetuation of the malarial parasite. At this point in the investigations it became urgently necessary to determine whether any other animal resembles man in its capacity to harbor the malarial parasites. Experiments on this point were perfectly uniform in their results:[26] neither by inoculation of ani-

19. Laveran: Bull: de l'Acad. de med., Paris, Nov. 23, 1880, ix, 1235; Laveran: Compt. rend. Acad. d. sc., 1881, xcii, 627.
20. Thayer and Hewetson: Johns Hopkins Hosp. Rep., 1895, v, 35-39 and 53.
21. Golgi: Arch. p. le sc. med., 1885, No. 4; Golgi: Gaz. d. osp., 1886, No. 53.
22. Danilewsky: Ann. de l'Inst. Pasteur, 1890, No. 7, pp. 427, 753.
23. King: Insects and Diseases; Mosquitoes and Malaria, Pop. Sc. Month., 1883, xxiii, 644.
24. Ross: Lancet, Dec. 18, 1897, and Feb. 26, 1898; Ross: Ann. de l'Inst. Pasteur, 1899, No. 2.
25. MacCallum: Jour. Exper. Med., 1898, No. 1, iii, 125.
26. Grassi: Bignami, Bastianelli, Dionisi, etc., Rev. Acad. dei Lincei, Nov. 28, 1898 to May 1899; Reviewed by Ziemann: "Malaria" Mense's 'Handb. d. Tropenkrankh.,' iii, Parts 1 and 2.

mals nor by having them bitten by infected mosquitoes was it possible to cause the parasites of human malaria to grow in their blood. The uniformity of these results gave assurance that the lower animals do not suffer from human malaria and that they are not concerned in the spread of the disease. It may be remarked, however, that diseases resembling malaria, but specific for certain types of lower animals, have been observed by Kossel, Ziemann, Koch and Vassall.

ANOPHELES MOSQUITO

The adjustment of the malarial parasites to their environment is very delicate; a certain stage of the parasite of human malaria will survive and multiply in mosquitoes of the genus *Anopheles,* but will not survive in other mosquitoes; the parasite of bird malaria will not survive in *Anopheles* mosquitoes, but survives and multiplies in *Culex* mosquitoes. The parasites of bird malaria do not live in human blood, even if introduced artificially or by an infected *Culex* mosquito, and the parasites of human malaria cannot live in other animals. Various other mosquitoes have been found to be capable of carrying malaria to human beings, nearly all being of the genus *Anopheles,* and it is now known that many genera of mosquito are quite incapable of carrying the disease.

It has been proved that the mosquito is not simply a passive carrier of the malarial parasite, but that the parasite invades the tissues of the mosquito and passes through certain complicated stages of development before arriving at a condition in which it is capable of infecting a fresh human subject. The changes which the parasite undergoes in the mosquito are apparently essential to the continued existence of the parasite, and we must conclude that the malarial organism is regularly parasitic for two living creatures—man and the *Anopheles* mosquito, and that it can continue to live and multiply only when it can occasionally pass from one of these hosts to the other and back.

The complicated and elaborate stages in the development and reproduction of the malarial parasite, both in man and the mosquito, have been worked out step by step. Grassi,[26] in 1901, studying pernicious or estivo-autumnal malaria; Schaudinn,[27] in 1901, the form causing tertian malaria. Schaudinn observed the parasites obtained from the proboscis of the mosquito enter human red-blood corpuscles, and thereby completed the chain of evidence required to prove conclusively that the mosquito parasite is the cause of human malaria.

DISAPPEARANCE OF MALARIA

The application of the facts learned by these studies has led to most remarkable changes in modern life. As soon as it became clear that man cannot acquire malaria except through the bite of a mosquito, and that the mosquito can become infected only by biting a malarial patient, the prevention of malaria and its eradication at once became a problem to be attacked by exterminating *Anopheles* mosquitoes and by preventing them from gaining access to malarial patients.

The salutary effect of the antimosquito campaign in decreasing the death-rate and sick-rate from malaria has quite fulfilled all predictions. The banks of the Suez Canal have become habitable; the Roman Campagna is losing its terrors; the construction of the Panama Canal has been made possible, and life in the tropics has been robbed of one of its greatest dangers, largely through the works of Laveran, Ross and Grassi. Moreover, the knowledge acquired has not only led to an intelligent campaign against malaria, but it has been of value in understanding other dangerous diseases carried by insects.

27. Schaudinn: Arb. a. d. k. Gsndhtsamte., 1902, xvlll, 169.

YELLOW FEVER

It will be recalled that up to a very short time ago the southern and eastern ports of this country frequently were in danger from epidemics of yellow fever. The cause of the disease was unknown, its manner of spread mysterious, its mortality high, and the dread of its appearance was constantly recurring. In 1900, five years after Ross discovered that malaria of birds is transmitted by mosquitoes, an American commission[28] made an elaborate investigation of yellow fever. The disease could not be conveyed by contact, nor by the ordinary channels through which bacterial diseases spread, and experimental animals could not be infected. The blood from patients was inoculated into non-immunes and they promptly developed yellow fever. Mosquitoes of the genus *Stegomyia* were allowed to bite susceptible persons after sucking blood from yellow fever patients, and the disease was transmitted after a number of unsuccessful attempts. The first person on whom this experiment succeeded was Dr. Carroll, one of the members of the commission, and a few days later Dr. Lazear, also a member of the commission, allowed himself to be bitten, contracted yellow fever and died. In spite of numerous and careful attempts, no other method could be found which could be supposed to play a part in the natural spread of yellow fever, and the commission concluded that victims regularly are inoculated from infected *Stegomyia* mosquitoes, a conclusion which has been abundantly confirmed. It has since been shown by Marchoux and Simond that the offspring of infected mosquitoes can transmit a mild form of yellow fever.

The most painstaking investigations have failed to demonstrate the virus of yellow fever, and there is reason to believe that it is too small to be seen even with a microscope. In spite of the fact that the germ of the disease is unknown, the work of the American commission has demonstrated that yellow fever will not spread in a community unless infected *Stegomyia* mosquitoes occur. The truth of this theory has been tested on a grand scale. In Havana the destruction of mosquitoes and the screening of yellow fever patients have relieved the town of the scourge. The same measures proved sufficient in New Orleans some five years ago, and have given equally satisfactory results at Panama.

TYPHUS AND DENGUE

Typhus fever and dengue, two diseases whose virus is still unknown, have been studied in much the same manner. In the case of dengue, Ashburn and Craig[29] concluded that the disease is transmitted by the ordinary *Culex* mosquito; in the case of typhus, Vassall finds that the blood of patients will convey the disease if inoculated into susceptible individuals, but he has not yet determined what biting insect is the carrier.

In 1903 minute bodies were found in the cells of victims of one of the obscure fevers of India, known as "kala-azar,"[30] or "dum-dum fever." This disease, confused with malaria for many years, was finally recognized as one of the scourges of India, where it has practically destroyed villages by its widespread and high

28. Reed, Carroll, Agramonte and Lazear: Philadelphia Med. Jour., 1900, vi, 796; Reed, Carroll, and Agramonte: THE JOURNAL A. M. A., 1901, xxxvi, 431.

29. Ashburn and Craig: Philippine Jour. Sc., Section B, 1907, No. 2, ii, 128.

30. Leishman: System of Medicine, Allbutt and Rolleston, Part 2, ii, 226.

mortality. The bodies found by Leishman[31] and Donovan[32] in kala-azar patients appeared to be the infectious agent causing the disease. The studies of Rogers and Patton[33] have shown that this disease also is carried by an insect. It has been found that bedbugs which have bitten patients with kala-azar have the protozoon in their stomachs, and it has been learned that the parasite undergoes development in the insect. Up to the present time the complete life history of the parasite has not been traced, and we do not know what becomes of it, nor how it gains entrance into human beings. The fact that the disease cannot be given to experimental animals increases the difficulties of study.

RESULTS OBTAINED

It can be seen from this brief review that an enormous amount of research work has been devoted to the study of malaria and related subjects during the last thirty years. There can be no doubt that our ideas concerning the nature of malaria and yellow fever, and our practices in dealing with them, have been profoundly modified by the discoveries of research workers. It is equally certain that the workers have been justified by the results attained; waste places have been made habitable; the conditions of human intercourse, welfare and health have been improved, and there has already been an incalculable saving in human life through the preventive measures now so well known. It would be as improper to assert that these results could have been attained just as readily without animal experimentation as to claim that they resulted solely from such experimentation. The use of experimental animals was, however, necessary—just as necessary as the study of sick patients; just as necessary as the study of mosquitoes. It is highly probable that the mastery over malaria and yellow fever would not have been obtained if studies on animals had been done away with thirty years ago.

SLEEPING SICKNESS AND ALLIED DISEASES

As far back as 1841 Valentin described motile protozoa in the blood of salmon. Similar actively moving bodies were found in frogs by Meyer and received from Gruby the name "*Trypanosoma sanguinis.*" Little attention was paid to these parasites for forty years, and, although found in the blood of various lower animals, they were not regarded as disease-producing agents. In 1879 Lewis reported the occurrence of trypanosomata in the blood of Indian rats. A short time later Evans discovered parasites of the same character in the blood of animals suffering from the fatal Indian epizootic "surra," and, as the result of his studies, concluded that surra is caused by the trypanosoma. The disease proved uniformly fatal for horses, mules and dogs; camels were much less susceptible, while oxen could recover after inoculation with the parasite.

About 1895 Bruce[34] was sent to study "nagana," a highly destructive disease of animals in South Africa, and found the animals infected with a parasite like that described by Evans in surra. He inoculated horses and dogs with the blood of cattle suffering from nagana and reproduced the disease.

TSETSE FLY THE CARRIER

In attempting to trace the manner in which animals became infected, Bruce was impressed by the fact that nagana has a very definite localization, occurring with frequency in certain regions, being absent from others. It prevailed in regions inhabited by a stinging fly, the "tsetse" fly (*Glossina morsitans*), but did not develop elsewhere. Bruce carried healthy horses, oxen and dogs from the mountains, where there is no nagana, to the tsetse fly country, where some became infected with tsetse fly disease. From these animals he established the fact that fly disease and nagana are the same. Bruce then brought tsetse flies up from the lowlands to the mountains, allowed them to sting animals sick with nagana, and found that for forty-eight hours thereafter the flies could infect healthy animals by stinging them. The importance of the tsetse fly as the agent transmitting nagana was emphasized by finding that the disease could not be conveyed by water, food, contact with sick animals, or other usual channels of infection. In attempting to discover where the disease arises Bruce examined the blood of the wild animals and found that many of them, although apparently in good health, are infected with the parasite of nagana; in other words, the wild animals are a permanent reservoir of infection.

Bruce also concluded that the tsetse fly acts mechanically in carrying trypanosomata, the parasite not developing while within the fly. In his experiments the trypanosoma of nagana proved fatal for most types of monkey, and for horses, mules, donkeys, cattle, dogs, cats, guinea-pigs, rabbits, rats and mice.

OTHER PROTOZOAN DISEASES

Since this discovery trypanosomata have been found to cause a number of widely prevailing diseases in the domestic animals, and experiments show that these diseases can be transferred to many other animals. Furthermore, protozoa of this type have been found widely spread in other animals, fish, etc., in which corresponding diseases have not been established. Of the diseases may be mentioned "dourine," discovered in 1896 by Rouget in African horses; "mal de caderas," discovered in South American horses by Elmassian and Voges in 1901; "Galzickte," discovered by Theiler in African cattle in 1902; and "coast trypanosis of Kamerun," discovered by Ziemann in 1902.[35]

In a surprisingly large number of these diseases it has been established by careful experiments, reinforced by a study of the conditions of spontaneous infection, that the parasite is carried from a sick animal and inoculated into a new victim by the bite of an insect. In the majority of trypanosomatic infections the insect is a biting fly belonging to the genus *Stomoxys* or *Tabanus* or *Glossina*.

Even after diseases caused by trypanosomata were well recognized in the lower animals the parasite was not found in man before the observation of Forde, and in his case there was at the time no proof that disease resulted from its presence. Proof was furnished, however, by Castellani, who found the same parasite in the spinal fluid drawn from a patient suffering from a fatal disease of Africa, known as "sleeping sickness," a discovery soon confirmed and extended by Dutton and Todd.

EXPERIMENTAL STUDY OF SLEEPING SICKNESS

It is impossible here to review the overwhelming amount of experimental work that has been performed in connection with sleeping sickness and trypanosomata during the last few years. Expeditions sent from England, France and Germany, and independent investigators, have been busily occupied with the subject.[36] As the result of investigations in this field it has already

31. Leishman: Brit. Med. Jour., May 30 and Nov. 21, 1903, i.
32. Donovan: Brit. Med. Jour., July 11, 1903, ii, 79.
33. Patton: Scientific Memoirs by the Officers of the Medical and Sanitary Departments of the Government of India, 1907, No. 27.
34. Bruce: Osler's Modern Medicine, 1907, i, 460.
35. Lühe: Mense's Handb. d. Tropenkrankh., 1906, iii, Part 1.
36. Thimm, C. A.: "Bibliography of Trypanosomiasis," London, 1909.

been established that trypanosomata are the cause of sleeping sickness; that the human being is infected through the bite of a fly of the tsetse fly type, *Glossina palpalis;* that the fly carries the parasite for five days or more after biting a patient or animal infected with trypanosomata, but can transmit the disease for only two days; that practically all the Glossina flies captured around certain lakes in dangerous districts contain trypanosomata; that the trypanosoma of sleeping sickness is fatal for some lower animals, especially for monkeys, dogs and cats, and can be transferred to them experimentally, while other animals are more highly resistant to the human trypanosoma.

In addition to the facts just stated, researches have been made to determine what changes are produced in the tissues as the result of trypanosomatic infection, and studies into the mechanism of protection and immunity are already beginning to appear.

PROBLEMS TO BE SOLVED

Many experiments have been made to discover drugs with which to combat this type of disease, with an encouraging degree of success, and already two drugs, trypanred and atoxyl, have become recognized as having a definite value in the treatment of trypanosomatic infections. Other investigations have been made to make clear the complicated changes which trypanosomata pass through during their growth and reproduction; Schaudinn's work deserves special attention in this connection. Upward of a hundred trypanosomata have been described, which differ among themselves, either in structure or habits. It is important to determine how many species we have to deal with; to establish the specific differences; to gain information regarding the variations; so far as possible to determine the conditions under which variation occurs, and especially to obtain a clear knowledge of the manner in which these protozoa live when they are not parasitic in the blood of animals. Many experimental studies have been made which have in view some of the objects mentioned above, and among other important results already achieved a method has been devised by Novy and his colleagues for growing trypanosomata in cultures.

TRYPANOSOMATA WIDESPREAD

Enough has been said to show that diseases caused by trypanosomata are widespread and fatal for many lower animals, and that in Africa this protozoon is exceedingly dangerous to human beings. The problem of conquering these diseases is an immediately pressing problem. The interests involved are enormous, often national or even international. Success in preventing and eradicating these diseases can be hoped for only when preventive measures are based on accurate and detailed knowledge of the parasites and of the insect carriers. In attaining this knowledge it is necessary to study the sick animals, the climatic and geographical peculiarities, the distribution and habits of insects, and, above all, to study the parasites themselves. It is folly to assert that this knowledge can be gained equally well without animal experimentation. There is hardly a line of research on trypanosomata that does not require animal experimentation at one point or another. Without animal experimentation, progress in combating diseases of this group would practically cease.

CONCLUSION

It may be well, in conclusion, to try to stand to one side and view critically the experimental work that is briefly summarized in this article; to face frankly the possible charge of inhumanity and cruelty and to face equally frankly the obvious motives of the experimenters, and the results aimed at and actually accomplished. Without doubt, to one not interested in zoology and out of touch with the ideals of investigation and research, it might seem wanton cruelty to capture field mice and wild birds and to study the blood of these creatures for parasites. There might well have been no obvious connection whatsoever between such examinations and human progress. But if studies like those of Danilewsky, MacCallum and Ross had been prohibited on the ground of cruelty, it is not improbable that the ravages of malaria would be yet unchecked. The wonderful revolution brought about by the discovery that yellow fever is carried only by the mosquito was almost directly a sequel to the malaria work, and it requires no great stretch of the imagination to suppose that if animal experimentation had been forbidden the world would to-day be as powerless as ever in the fight against these two scourges.

Again, there is no question that many animals have been sacrificed in experiments connected with Texas fever, surra, nagana and similar diseases. These diseases do not even attack human beings, and, therefore, in this group of cases, we do not have to balance the value of a human life against that of an animal. The motive animating the experimenters is perfectly clear and cannot be interpreted except in one way by any one who chooses to weigh the evidence. For example, no flight of imagination could go to the point of supposing that Bruce was sent out to South Africa in order to perform brutalizing experiments, or that he would have gone for any such purpose. It is so obvious that it sounds puerile to state that Bruce's mission was to learn to master nagana and to put a stop to its ravages among live stock. The question may be raised, "Was Bruce justified in sacrificing some animals in his experiments on the chance of thereby gaining information that might be used in saving the lives, or of improving the condition of great numbers of other animals?" There can be only an affirmative answer to this question, so far as economic interests are concerned, and even from the viewpoint of a strict opponent of animal experimentation it might seem proper to save the lives of many animals by the sacrifice of a few. The opposite attitude would, in fact, be both foolish and cruel, as it would disregard the welfare of the great majority of the animals. And yet if once it be admitted that animals may be sacrificed for the welfare of other animals the whole attack against animal experimentation collapses, for surely human progress and human welfare are objects as worthy as the welfare of the lower animals.

ARTIFICIAL VAGINA BY INTESTINAL TRANSPLANTATION

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In the *Annals of Surgery* for September, 1904, I described an operation which I had devised, and the feasibility of which I had demonstrated on the cadaver, for the establishment of an artificial vagina in cases of acquired or congenital absence of that organ, by transplanting a loop of intestine. A very thorough examination of the literature of artificial vagina had been made for me by an expert connected with the Library of the Surgeon General's Office, and the operation suggested was found to be entirely unique.

Three years later, having had an opportunity to employ this method. I reported[1] the case in full at the twentieth annual meeting of the American Association of Obstetricians and Gynecologists. I have now had four of these cases and can recommend this method of operating to the profession with very great confidence.

Patient.—My fourth case was in a young woman, aged 18. She had always enjoyed excellent health, but had never menstruated, nor had she experienced any menstrual molimen. She was brought to me in the spring of 1909, but as she had just graduated from high school I made no examination but encouraged the mother to delay, thinking that the amenorrhea would disappear with improved nutrition; and I directed outdoor life and vigorous exercise. This failing to accomplish the desired result the patient was again brought to me, August 20, and I then made an examination. (I had previously operated on this patient, once for appendicitis, making the usual McBurney operation, and once for left inguinal hernia, the hernia containing the ovary. The ovary was replaced, and the parts closed in the usual way, but the patient was a mere child and no examination of the pelvic organs was thought of.)

Examination.—There was found complete absence of the vagina, its presence not being indicated even by so much as a dimple. Rectal examination was somewhat unsatisfactory, but was absolutely negative as to the existence of uterus or ovaries. I advised examination under an anesthetic, and this was done on the following morning. I could then by the rectum make out an irregular mass in the right side of the pelvis, but the character of this could not be determined. I supposed

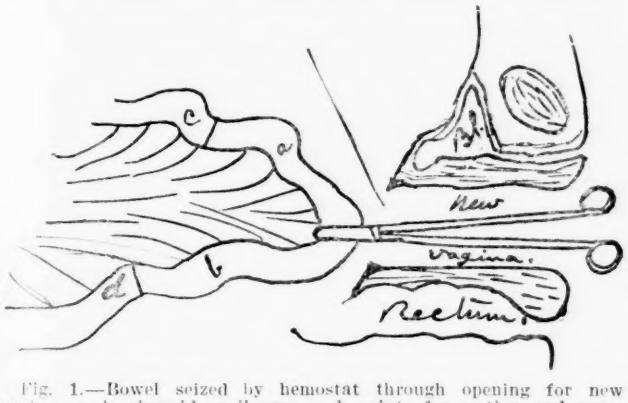

Fig. 1.—Bowel seized by hemostat through opening for new vagina; a, b, sigmoid or ileum; c, d, points for section and anastomosis.

it to be either the right ovary or an imperfectly developed uterus. It was considerably larger than a normal uterus, so that if it represented that viscus it would probably be found that the increased size was due to retained blood. The deformity was carefully explained to the patient and her mother, and the possibilities of making an artificial vagina were discussed at some length. They were both very anxious that the operation should be made, and it was accordingly undertaken August 23.

Operation.—The perineum and lower abdomen having been prepared, the patient was placed in the lithotomy position and a transverse incision made in the perineum at a point corresponding to the normal opening of the vagina. With an index-finger in the rectum and a sound in the bladder, I carried this dissection forward until the peritoneum was reached. This opening was made amply large, and then lightly packed with gauze pressed in around a large hemostat, which was introduced so as to expedite the second step of the operation. The patient was then placed in the horizontal position, and the abdomen opened in the median line. It was then found that the mass in the pelvis, which had been previously made out, was behind the peritoneum. I at once passed my hand up and found, as suspected, an entire absence of the right kidney, and then a little more investigation showed that this tumor was the kidney congenitally misplaced. Not a trace of the uterus could be found. (In two other cases which I have had of congenital absence of the vagina the uterus was represented by a small bit of tissue, about the size of the end of the little finger, on each side in close proximity to the ovaries.) The ovaries were normal, but were found on each side much higher up than usual. To each one was connected a small bit of Fallopian tube, like a plume on a lady's hat. On the right side was a very imperfect round ligament, but no trace of any on the left. The field of operation having been protected by gauze sponges, the lower end of the ileum was brought up, the intestinal contents displaced for about 12 inches, and this portion of bowel resected but with careful preservation of the mesentery. The ends of the resected section of bowel were inverted with purse-string suture, and the other ends connected to each other by a Murphy button so as to reestablish the continuity of the canal. I had left just enough of the lower end of the ileum attached to the colon to enable me to make this anastomosis. The peritoneum over the vagina was then opened, exposing the hemostat, which was then pushed on into the pelvis by an assistant. The detached bowel was caught at its middle by the hemostat and drawn down into the artificial vagina. The peritoneum was carefully brought together over and around the ends of this piece of bowel, so as to make a smooth floor. The abdomen was then closed in layers in the usual way. The patient being then placed in the lithotomy position, the bowel was opened

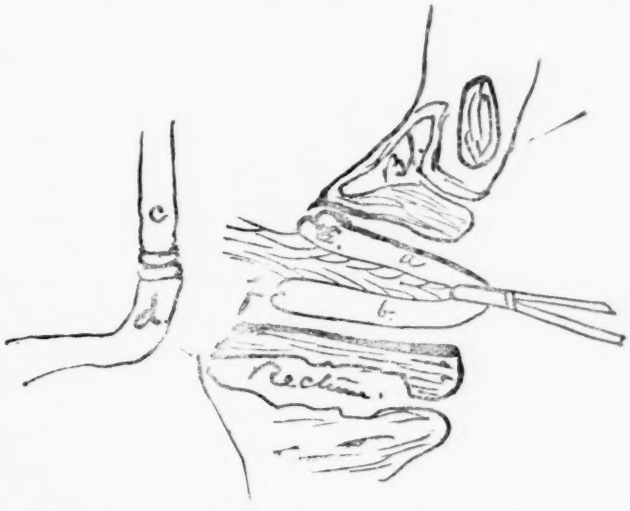

Fig. 2.—Section of bowel (a, b) with mesentery intact, drawn into new vagina; c, d, anastomosis; e, f, closed ends.

where it had been caught by the hemostat, each leg of the loop wiped out carefully, and then packed with iodoform gauze so as to press it snugly against the walls of the artificial opening. The edges of the opening into the bowel were caught to the edges of the new vulva, and a small drainage wick introduced at the very bottom so as to take care of any oozing which might take place. (The accompanying illustrations will serve to make clear the text.)

Postoperative History.—The patient went through the operation very nicely and made an absolutely uneventful recovery, the button coming away in two weeks. She returned to the hospital some weeks later, when the septum was removed in the usual manner, and at this time an ordinary examination would fail to reveal anything abnormal about the vagina, except the absence of a uterine cervix.

While studying the technic of this operation from a theoretical point of view, I took pains to examine the ileum and sigmoid in a large number of patients on whom I was making ordinary abdominal operations. Several hundred patients were thus examined, and in all I found that there would be no difficulty in drawing down such a loop of ileum into the vagina, or a loop of sigmoid if for any reason the ileum should not be found satisfactory. With either there would be plenty of slack of the mesentery so that the circulation would not be

1. Am. Jour. Obst., lvi, No. 5.

interfered with. I have always used, however, a loop of ileum because resection of the ileum is safer than resection of the sigmoid. In all of my cases operative recovery was absolutely smooth, and the new vagina seems to take the place very satisfactorily of the natural organ. I was induced to use the bowel for this purpose because a very extended study of the literature of artificial vaginas had shown that in cases of entire absence all other methods resulted in almost complete failure, although full of promise in many cases when the patient left the operating-table. The favorite method of operating had been by transplantation of pieces of skin, to line the artificial canal. In all of these cases, however, to the reports of which I had access, the ultimate results had been very unsatisfactory owing to cicatricial contraction. By the use of the bowel a normal mucous membrane is provided, surrounded by normal connective and muscular tissue, and with an ample blood-supply. Theoretically and practically, therefore, such a vagina would seem to fulfil to the highest degree all the requirements.

The dangers of operation are simply those inherent to any other deliberate resection and anastomosis of intestine; but the operation is one which should certainly not be undertaken by a tyro in surgery. My first operation took over two hours, the last one about half that time, and I think that in an uncomplicated case the operation should be made within the hour. There is, of course, no hemorrhage to amount to anything, and if the field of operation is carefully protected there should be no shock. The danger, therefore, would be merely the danger of a possible infection from the intestine, and that danger in the hands of an expert is very slight. Nevertheless, the danger should be fully explained to the patient, who would then decide whether the operation would be worth while.

In addition to the four cases of my own, a successful operation has been reported by Mueller[2] and one by Mori.[3] Thus we have six successful cases with no mortality. (So far as I can learn neither Mori nor Mueller refer in any way to my own previous work, although my publications preceded theirs by several years. I understand, however, that such a failure to give credit is in certain foreign medical circles not looked on as either unethical or dishonorable).

115 South Grant Avenue.

TORSION OF THE GREATER OR GASTROCOLIC OMENTUM

COMPLICATED BY ACUTE APPENDICITIS

W. H. LUCKETT, M.D.
NEW YORK

So very little is really known of the mechanical cause of the twisting of the omentum that the report of this case is interesting and may serve to throw some light on the subject.

Less is known of the symptom-complex leading to a correct diagnosis of such torsions. This is demonstrated by the fact that in some sixty odd cases recently collected, extending over a period of twenty-seven years since 1882, when the first report was made by Oberst, only one case was diagnosed as such before the operation.

Corner and Pinches lead one to be satisfied with a diagnosis at the operating table and not a differential one beforehand.

Fuller points out the difficulty of diagnosis and says that it is not at all remarkable or strange for a torsioned omental tumor to escape detection even during a laparotomy, unless the incision happened to be made directly over the tumor.

Richardson suggests an anatomico-pathologic classification according to the point of twisting, and asks for a report of all cases with an explicit statement as to the location of the tumor and the point of torsion. He thinks that if the possibility of torsion of the omentum be kept in mind in all cases of abdominal symptoms pointing to a strangulation a preoperative diagnosis of torsion of the omentum would become more frequent.

Weiner offers the very practical suggestion that if we cut down on a hernia that produced symptoms of strangulation and find only a strand of omentum in the canal we should investigate the intra-abdominal portion of the omentum to make sure that there is no torsion present.

Patient.—H. P. F., foreman by occupation, 32 years old, was admitted to my service at the Harlem Hospital, June 14, 1906.

Previous History.—The patient had an attack similar to the present one two years ago, from which he recovered. He was operated on ten years ago for right inguinal hernia.

Present Illness.—Two days previous to admission he was seized with very severe pains in the right iliac region, which continued unabated up to that time. He had been constipated since the beginning of the attack. There was no vomiting. He was in great pain on admission. His temperature on admission was 103 F., pulse 120, respiration 26.

Physical Examination.—General appearance—a well-developed, conscious male, very obese. Eyes—pupils contracted but reacted naturally; mucous membrane red and dry; lips scarlet; pulse regular in force and frequency; very rapid; respiration shallow and jerky; abdomen rigid and tense, general tenderness, tympanitis, pain more marked on right side. Urine—albumin with casts, hyalin, granular and epithelial. Arteriosclerosis was present. An indistinct mass could be made out to the right of the umbilicus, reaching down into the right iliac region. A cicatrix in the right inguinal region indicated that an operation for hernia had been performed. The wound had apparently healed by primary union, and there was no signs of recurrence. A diagnosis of appendicitis was made. A high leucocytosis and differential blood-count, with the mass and other symptoms suggested abscess.

Operation.—A long incision was made through the deep fascia on the outer edge of the right rectus muscle over the tumor. A quantity of bloody fluid escaped and a large mass of congested and partially strangulated omentum immediately presented itself in the wound, and was found to be adherent beneath the hernial cicatrix by the small thin band of adhesion at the lower end of the specimen seen in the illustration. This and several other small bands of newly formed inflammatory adhesions were easily broken up; as they were so small they were not ligated. The omentum was delivered through the wound and excised near the transverse colon. The appendix, which was found to be very markedly congested, was removed. There were, however, no adhesions between the omentum and the appendix. The abdomen was closed without drainage, and the patient left the operating room in good condition. June 18, four days after the operation, the wound was dressed and was found dry and clean. June 30 the patient was up and well.

Examination of Specimens.—The specimen of the appendix was small; there were no adhesions, though it was markedly congested, but probably not enough to account for the high temperature, pulse and leucocyte count, and surely not for the general congestion and the fluid in the abdomen.

The specimen of the omentum (see illustration) was 17 inches long, weight 9¾ ounces, and had 27 distinct complete twists or turns, the reverse to the thread of a right-hand screw. When partly untwisted it was found that the small band of adhesion to the peritoneal side of the hernia cicatrix

2. Mueller, A.: Formation of Vagina from Loop of Small Intestine, München med. Wchnschr., Dec. 21, 1908; abstr. in THE JOURNAL A. M. A., Jan. 29, 1910, liv, 419.

3. Mori M.: Zentralbl. f. Gynäk., Jan. 1, 1910; abstr. in THE JOURNAL A. M. A., Feb. 12, 1910, liv, 577.

probably came off from the lower right-hand corner of the omentum. The twists or turns as counted commenced near the attachment of the omentum to the transverse colon and ran all the way down the entire length of the omentum to the small band of adhesion to the hernial cicatrix.

With a few more twists the small band of adhesion would have parted and I should have reported this case as a pure intra-abdominal torsion without adhesions or the presence of a hernia. The result of the hernia operation ten years ago was perfect, and excepting the small spot to which the band was attached the peritoneum beneath the hernia scar was perfectly smooth, as demonstrated by palpation within the abdomen. Evidently a small tip of the omentum had either been ligated with

Specimen showing torsion of omentum and small band of adhesion at one end.

the hernial sac, or the omentum had subsequently become adherent at this point, thus affording a diagonal line from the upper left corner of the omentum at the transverse colon to the lower right hand corner of the omentum, around which the free lower left irregular triangle could and probably did revolve. If the adhesion played a rôle in the torsion it does not seem possible for such adhesion at the lower right border of the omentum to have been present for ten years without giving rise to an earlier twisting. Surely the torsion could not have been present for ten years, for there would have been adhesions between the twists that would have prevented the untwisting, which was fairly easily accomplished. If the adhesion was present for ten years without torsion, then some other force was necessary for its production. Was it the acute attack of appendicitis? The omentum has a habit of enfolding the appendix during certain inflammations. Was it making violent efforts to get to the appendix, or was the twisting a result of a purely exterior force such as the peristaltic wave of the intestines particularly imparted by the ileum, over which the omentum lay, just before it entered the cecum? The ileum at this point being more or less fixed, the propulsive effort is constantly in the same direction from the left to the right, and the direction of the twists in my specimen of omentum are the same as would be expected if this was the case. Now, the twists once started and the resulting inflammation in the omentum commenced, the increasing length of the inflamed veins would themselves tend to wrap around a line between two more or less fixed points. The swelling, edema and extravasation of the blood-cells would for the same reason also augment the twisting force.

Now let us go a step further. Nearly every case of reported torsion of the omentum was accompanied by some form of inflammation, either within or without the abdomen, as in a hernia. Was the inflammation the cause or the result of the torsion? The structure of the omentum has for its chief framework its vessels, long thin arteries that come off for the most part from the gastro-epiploic arteries at the great curvature of the stomach, and run downward to the lower border of the omentum, and then turn upward in the posterior layer to anastomose with the arteries of the colon. The veins are about the same. Enlarged full veins have been characteristic of the specimens of torsion of the omentum. Now the veins increase in size and length more rapidly in inflammation than the arteries, and would have a natural tendency to wrap around the latter and carry the loose mesothelium, and may perhaps be the chief factor in the production of torsion of the omentum; and I think also that we can add to this the force of the pulsations of the omental arteries.

I have suggested the foregoing, for I have long felt that the torsion of the omentum was not due wholly to exterior forces, and I believe that we must look for a cause within the omentum itself that would produce or is capable of producing torsion, because in pure hernial torsion of the omentum where the omentum is in contact with only the smooth wall of the sac it seems as if the possibility of an exterior force is negative.

112 West One Hundred and Nineteenth Street.

A DUODENAL TUBE

SECOND COMMUNICATION

M. GROSS, M.D.
NEW YORK

In my first communication on this subject[1] my principal object was to show that a method had been found to pass over the pyloric ring and to reach the upper part of the small intestine. The present communication serves to present the method in greater detail.

The stomach-tube devised by me in 1894 requires only a few special alterations to answer the purpose of obtaining the duodenal contents.[2]

Apparatus.—This is shown in Figure 1.—A perforated round metal ball, twice the size of a pea and enveloped by the tube, serves as the end-piece. Attached to the end-piece is a thin rubber tube, not easily collapsible, about 0.2 cm. in diameter 125 cm. in length and graded in divisions of 10 cm. To this is attached a glass receptacle, which is connected by a length of

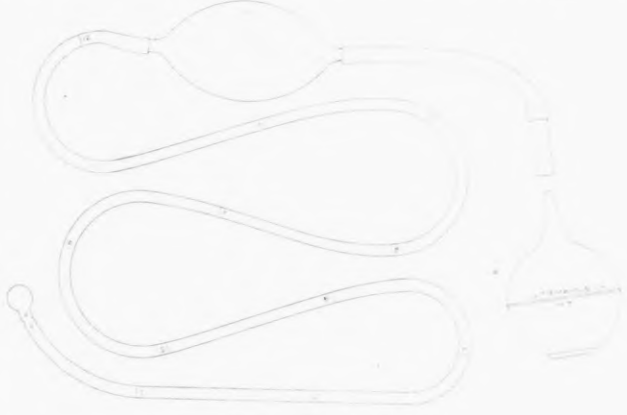

Fig. 1.—Duodenal tube.

tubing with a mouth-piece to be used by the operator if he aspirates himself, as I prefer doing; otherwise this part can be replaced by an aspirating bulb.

Anatomy.—Figure 2 speaks for itself, but a few facts concerning the position and size of the duodenum will be in order. The duodenum is the shortest and widest portion of the small intestine and is situated deeper than all the other parts of the intestinal canal. It is not quite 20 cm. long, the ascending portion measuring 4

1. Gross, M.: New York Med. Jour., Jan. 8, 1910.
2. Einhorn (Med. Rec., Jan. 15, 1910) uses a similar tube arranged on the same principle, which he calls a duodenal pump. He, however, employs a somewhat different method of inserting it.

to 5 cm., the descending about 7, and the horizontal part 6 to 7 cm. Its diameter is 3 to 3.5 cm. except at the pyloric ring, where it is a little less. The direction of the so-called ascending and superficially situated part is left inferior to right posterior. The descending part, which encircles the head of the pancreas in the shape of a semi-circle, receives at its concave side and near the transition into the horizontal part, the common duct of pancreas and liver. The horizontal part rests on the third lumbar vertebra and is the most firmly fixed

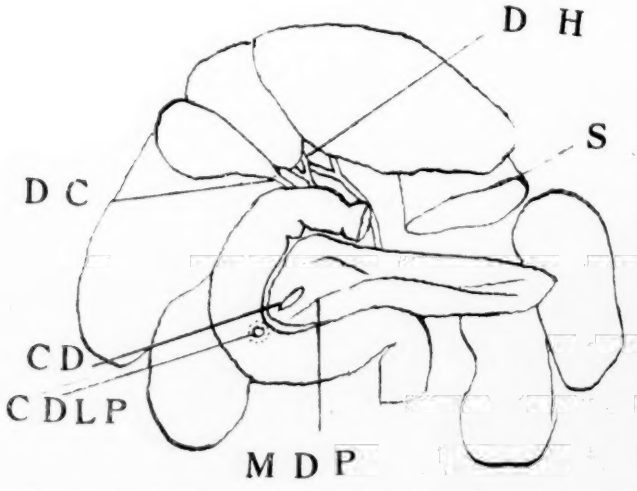

Fig. 2.—Duodenum in relation to other organs; D H, ductus hepaticus; S, stomach; M D P, main duct of pancreas; C D L P, common duct of liver and pancreas; C D, common duct; D C, ductus cysticus.

part of the duodenum, so that in a prolapse of the stomach the pylorus and the descending duodenum will participate most, causing a kinking at the transition point into the horizontal section of the duodenum. The first section of the duodenum is not provided with the folds, the valvulæ conniventes; they are not clearly marked in the descending part, while toward the jejunum they are denser and more prominent. On and between these folds there are the so-called villi intestinales. These villi and the entire mucosa of the small intestine are covered with epithelium which belongs to the cylindrical epithelia and consists of cylindrical and goblet cells. The glandular apparatus of this portion of the intestine consists of Brunner's glands, which are found exclusively in the duodenum, and Lieberkühn's glands, which are found in all parts of the small intestine.

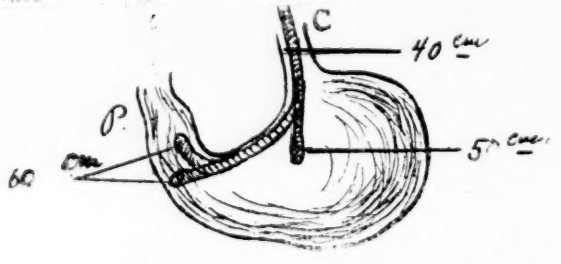

Fig. 3.—Stomach, showing insertion of tube; C, cardia; P, pylorus.

Test Meal.—In the morning the patient is given a test meal consisting of a tumbler (250 gm.) of milk and water in equal parts. This mixture, which cannot cause a great flow of hydrochloric acid, contains enough fat and water to produce an irritation of the mucosa of the duodenum. Half an hour later the duodenal tube is introduced.

Principles of Action.—The fact that the pyloric ring may be reached and passed by the tube is due to the adaptability of the small metal ball, which gradually leads the tube to conform to the lesser curvature of the stomach, and in continuous movements glides into the antrum pyloricum.

Technic of Insertion.—1. Patient swallows the little ball, smoothed with saliva, until the division of 45 cm. has reached the lips. If the patient is accustomed to taking stomach-tubes, there will be no difficulty whatever.

2. Lightly blowing several times into the stomach will smooth it out, so that the tube will hang freely in the cavity (Fig. 3).

3. Patient lies down and slowly turns over on his right side.

Fig. 4.—Skiagraph showing tube in the duodenum. Tube slightly accentuated by retouching the plate.

4. After the lapse of a few minutes (adaptation time of tube) the tube is allowed to glide down through the half-open mouth without swallowing, simply following the pull of the ball, until a depth of about 60 cm. has been reached.

5. After another five or ten minutes (insertion time of ball in the pars pylorica) the first aspiration is made, which will show that already now the gastric contents have a slightly yellowish tint as a sign of the accomplished insertion. The patient, whose mouth is still half-open, is warned more strongly than before not to make any deglutition movements, in order to give the tube an opportunity of being drawn in still further. After a time the tube will show that 65 or 70 cm. have been inserted.

6. Another aspiration is made and in nearly every case there will be a uniformly turgescent fluid of egg-yellow tint, which is no longer interspersed with casein flakes of the milk and gives an acid or weakly acid reaction.

7. After waiting a little longer and with occasional aspirations it will be possible in normal cases to obtain the characteristically yellow aqueous contents of the duodenum, which sometimes display a greenish-yellow fluorescence and are of neutral or alkaline reaction.

8. Now that there is a certainty of the pyloric ring having been passed, the patient may be allowed to sit up, there being no further danger of the ball falling back against the wall of the stomach.

Fig. 5.—Skiagraph showing tube in the duodenum; bismuth used, showing outline of stomach. Tube accentuated by retouching.

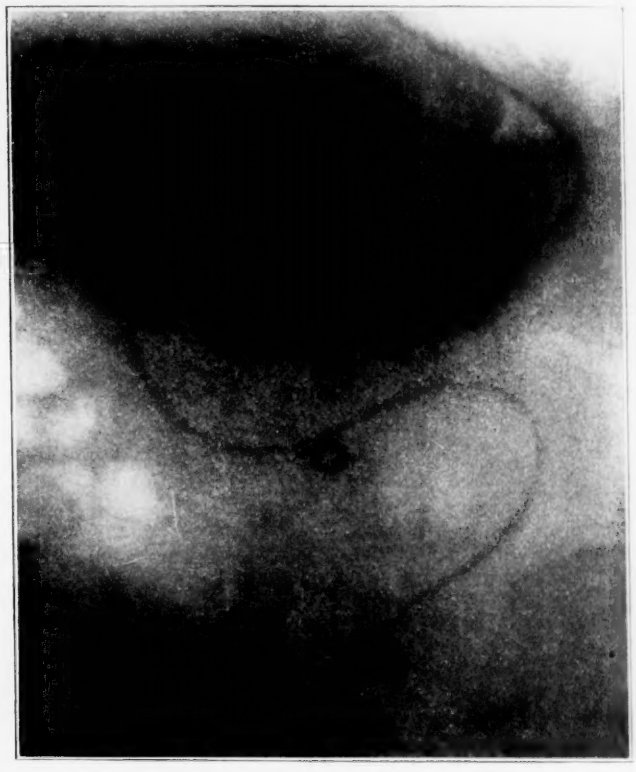

Fig. 6.—Skiagraph showing duodenal tube within the intestine low down. Tube accentuated by retouching.

On withdrawing the tube, a resistance may be felt at the pyloric ring (in the case of my achylic patient I did not find one) which can be overcome without difficulty. A constriction at the œsophagus will be overcome by a few movements of deglutition.

The causes which may make it difficult or impossible to introduce the tube are very various, and sometimes cannot be ascertained. Practice and patience, however, will do much to ensure a favorable result in time. Whenever there is a delay or impediment in the insertion of the tube, the first thought should be of the "repulsion mechanism" of the pylorus, the "door-guard", the function of the pars pylorica being to throw back the chyme against the gastric wall and by mechanically breaking it up, render it more assimilable to the gastric juice, and thus representing a kind of sorting apparatus. Hand in hand with this process goes the closing and subsequent opening of the pylorus, and to this repulsion mechanism our little ball is also subjected—a fact which explains the occasional difficulty of inserting it rapidly.

In consideration of these facts it appears necessary (1) to introduce the tube at the climax of digestion, or half an hour after the test meal, at a time when the opening of the pylorus takes place oftener and more extensively; (2) to keep the tube "short" at a length of about 60 cm., until the ball has been definitely located at the pyloric ring. As to this point I refer to Paragraph 4 of the "Technic of Insertion". Besides, there may be stenoses and tumors of the pylorus which make it impassable, or there may be long-continued spasms of the pylorus after hypersecretions, a condition which may be relieved by alkalies or previous lavage of the stomach. In one of my patients the ball could not even get through the cardia and an operation disclosed carcinoma of the head of the pancreas, of the lesser curvature, probably also involving the cardia. In another patient I found it impossible, after repeated attempts, to introduce the tube into the duodenum, and operation divulged carcinoma of the pylorus.

Reaction of Fluids Obtained.—Sometimes the fluids lose only slowly, or not at all, their acid reaction, although otherwise the aspirated fluid proves both microscopically and chemically that it originates from the duodenum. The causes may vary considerably. In hypersecretions, for instance, it might be assumed that the neutralization takes place only lower down in the intestine. In these cases the possibility suggests itself that the pyloric ring has never been passed and that the aspirated fluid had been regurgitated from the duodenum into the stomach. This, however, can be decided by repeating the aspiration, doing one while the ball is supposedly in the duodenum and one after withdrawal

of the tube to 50 cm. This should be done after a cup of black coffee has been ingested, on which the difference in color of the two fluids taken successively will dispel any doubt. In the case of my achylic patient no difference in reaction could be obtained, and since there was also regurgitation, I administered a weak solution of tartaric acid and was then able to demonstrate beautifully the reverse process of an alkaline reaction turning into acid.

Without indulging in enthusiasm it may be said to-day that the duodenal tube has come to stay. It will require further patient work to perfect the method and when this has been satisfactorily accomplished, we shall be able to derive the full benefit from it.

315 Second Avenue.

ACTINOMYCOSIS OF SKIN

E. GARD EDWARDS, M.D.
LA JUNTA, COLO.

This case is reported on account of the rarity of the disease and the especial rarity of primary infections of the skin from the ray fungus.

Lesions in actinomycosis of the skin.

History.—The patient was a cowboy, aged 26. The lesion had started as a hard nodule near the angle of the jaw, which rapidly increased in size to that of a filbert and which at the same time showed in the skin covering it the peculiar dark red color of actinomycosis. Several other nodules formed and all, at the time the patient consulted me, were in a stage of softening and discharging a purulent matter. The disease had been in progress some weeks and had been variously diagnosed and treated but without success as to a cure or even amelioration.

Diagnosis.—The patient denied syphilitic taint, nor did he show it. Tuberculous conditions were eliminated. One of the nodules was incised and a microscopic examination made of the discharge. The ray fungus was found without difficulty.

Treatment.—Under chloroform anesthesia, every accessible nodule and sinus was opened, curetted and wiped with pure phenol, followed, after the characteristic whitening of the tissues, with 95 per cent. alcohol. The dressings were ordered kept moist with 50 per cent. alcohol, and every other day, so long as the incised parts were open, full strength iodin was applied. No internal medication was given.

Result.—The tissues healed readily inside of three weeks. No return of the disease had occurred the last time the patient was seen, two years later.

A CASE OF FILARIAL HEMATOCHYLURIA

TREATED AFTER THE METHOD OF WHERRY AND MCDILL WITH APPARENT RECOVERY *

CREIGHTON WELLMAN, B.A., M.D.
AND
EDWARD VON ADELUNG, B.S., M.D.
OAKLAND, CAL.

Numerous remedies have been tried in the treatment of filarial hematochyluria, and there is considerable literature on the subject. Lawrie,[1] in 1891, seemed to get good results from the administration of thymol, and Flint,[2] in 1895, thought he had a cure in methylene blue, but subsequent writers have failed to confirm their results. In 1905 Wherry and McDill[3] reported a case treated by thorough cinchonization and subsequent exposure to the *x*-rays.[4] We quote from their report as follows:

> She (the patient) was given 80 to 90 grains of quinin sulphate during forty-eight hours, followed by *x*-ray exposures of five minutes, with the tube 18 inches away. Quinin having been administered daily, these exposures (over the lumbar region) were performed at 2 to 3 p. m. on September 8, 10, 11, 12, 14, 16, 17, 18, and again after cinchonizing as before at 9 p. m. on September 29 and 30. On October 2 the skin over the chest and abdomen became reddened and hot. A chill and left pleurisy developed. Paracentesis produced about 600 c.c. straw-colored fluid on October 8. Skin scarlet all over body. All this time the urine remained thick and bloody, but on October 10 became normal and has remained so. The temperature throughout, except during the attack of pleurisy, remained about normal, 97 to 99.4 in the morning and 98 to 99.4 in the evening. Until the pleuritic attack the patient had gained 25 per cent. in weight and general appearance, and although an evening temperature of 1 to 3 F. persisted until October 22, she regained her strength so rapidly that on October 29 and 30 the *x*-ray was again applied for fifteen minutes after quinin, with the bulb five inches away. Although the patient has been at home and walking about for the last two months her chyluria has not returned. The living embryos still persist in her blood.

About four years later the authors report again as follows on the case:

> The hematochyluria cleared up on Oct. 10, 1904. Two months later filarial embryos were still present in the peripheral blood, but repeated examinations since, made about once a year, have failed to reveal the embryos. The last examination was made one year ago, 1908. The patient is now in Nagasaki and said to be in good health.

The writers of the present paper wish to record a similar case treated with quinin and *x*-rays, resulting in apparent recovery. While it is too soon to say more than we have indicated in the title to this report, yet the recov-

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* From the Laboratory of Tropical Medicine, Oakland College of Medicine, Oakland, Cal.

1. Lawrence: Lancet, London, Feb. 14, 1891, p. 364.
2. Flint: New York Med. Jour., June 15, 1895, p. 737.
3. Wherry and McDill: Jour. Infect. Dis., June 24, 1905, p. 412.
4. In a footnote the authors add: "Unfortunately we are unable to state the exact hardness of the *x*-ray bulbs. In order to obtain a clear radiograph of the bones of the pelvis with this apparatus (the one used) an exposure of fifteen minutes with the bulb at a distance of five inches from the skin is necessary. Filarial embryos in a thin layer of blood, collected after cinchonizing, exposed to the rays for five minutes with the bulb 16 inches away are not killed but they squirm about in a very excited manner.".

ery is up to the present date (Jan. 24, 1910) complete and so far may be regarded as a confirmation of Wherry and McDill's observation. The history of our case is as follows:[5]

Patient.—H. U., aged 26, single, Japanese, came to San Francisco six years ago from Japan, stopping at Hawaii three months on the way. He has been a resident of Oakland for three years; went to Alaska four years ago and on his return to California had hematochyluria for two months in August and September. In 1908 he had another attack which began in August and lasted up to the date when first seen by us (Dec. 14, 1909). He was not very strong but had no pain to speak of except a slight pain below right scapula on rising.

Examination.—The patient was a fairly well-nourished Japanese with no symptoms except the character of the urine and weakness. Pulse 100, temperature 98. An examination of his blood at midnight showed considerable numbers of a sheathed filarial embryo. The urine was almost as turbid as milk and had a decided bloody tinge. It was examined on December 12, with the following results: Specific gravity 1,028, reaction slightly acid, albumin about 0.3, no sugar, no pus. A differential leucocyte count on the same date revealed the following findings:

Polymorphonuclear neutrophiles	46 per cent
Lymphocytes	29 per cent
Large hyaline mononuclears	14 per cent
Eosinophils	11 per cent

Transitionals counted with polymorphonuclears.

Treatment.—The patient was put on the treatment suggested by Wherry and McDill. We give the details of the treatment, as these are important in a purely empirical question like the present in which we have no idea of the principles involved.

The quinin was given as follows: December 27, 6 a. m., one capsule.[6] 10:30 a. m. two capsules.

December 28, 2 a. m., 2 capsules; 6 a. m., 2 capsules; 9:30 a. m., 2 capsules; 1 p. m., 2 capsules; 4:30 p. m., 2 capsules; 8 p. m., 2 capsules.

December 29, 1:15 a. m., 2 capsules; 7 a. m., 2 capsules, 10:25 a. m., 2 capsules; 1:30 p. m., 2 capsules; 4:45 p. m., 2 capsules; 8 p. m., 2 capsules; 11:20 p. m., 2 capsules.

December 30, 2:30 a. m., 2 capsules; 5:45 a. m., 2 capsules; 9 a. m., 2 capsules; 12:30 p. m., 2 capsules; 3:35 p. m., 2 capsules; 7 p. m., 2 capsules; 10:15 p. m., 2 capsules.

December 31, 1:45 a. m., 2 capsules; 5:15 a. m., 2 capsules; 9 a. m., 2 capsules; 1 p. m., 2 capsules; 6 p. m., 2 capsules; 11 p. m., 2 capsules.

Jan. 1, 1910, 4 a. m., 2 capsules; 8 a. m., 2 capsules; 12 p. m., 2 capsules; 5 p. m., 2 capsules; 9 p. m., 2 capsules.

January 2, 1:30 a. m., 2 capsules; 5:30 a. m., 2 capsules; 9:30 a. m., 2 capsules; 1 p. m., 2 capsules; 6:30 p. m., 2 capsules; 10 p. m., 2 capsules.

January 3, 1:30 a. m., 2 capsules; 11 a. m., 2 capsules; 2:30 p. m., 2 capsules.

January 4, 9 a. m., 2 capsules; 12:45, 2 capsules; 4:30 p. m., 2 capsules; 8 p. m., 2 capsules; 11 p. m., 2 capsules.

January 5, 7 a. m., 2 capsules; 10:30 a. m., 2 capsules; 2 p. m., 2 capsules; 5:30 p. m., 2 capsules; 9 p. m., 2 capsules.

January 6, 1 a. m., 2 capsules; 6 a. m., 11:30 a. m., 2 capsules; 3:30 p. m., 2 capsules; 7 p. m., 2 capsules.

January 7, 2 capsules; 7 a. m., 2 capsules; 11 a. m., 2 capsules.

From this on to Jan. 12, 1910, the patient took three capsules per day.

The patient complained considerably of the symptoms of cinchonism at first and was with some difficulty persuaded to continue the quinin.

The *x*-ray exposures were given as follows:[7] December 14, one and a quarter minute exposure.

December 22, one minute exposure.

December 31, one minute.

January 7, forty-five seconds.

January 12, thirty seconds.

The report of the patient was as follows: December 28, 29, 30, he suffered considerably from the quinin and was very weak.

December 31, patient felt weak but improved.

January 3, he felt stronger.

January 7, he felt stronger than he had felt for a long time, was losing in weight; weighed 126 pounds, the last time he had been weighed previously; now weighed 115½ pounds, in the same clothing.

January 11, he felt better; had gained slightly in weight.

January 12, he felt and looked much better.

The report on the urine now follows: December 8, reddish milky, reaction acid; albumin present by heat and acid tests, no sugar.

December 12, as above.

December 22, urine the same. On standing several days it appeared as shown in Figure 1.

December 27, urine was much clearer; no white upper layer, lower layer much less, a markedly improved urine. Red and white corpuscles present, also epithelium, no casts.

Fig. 1.—Gross appearance of solids in urine after standing (before treatment); a, amber color; b, blood, etc.; c, "cream."

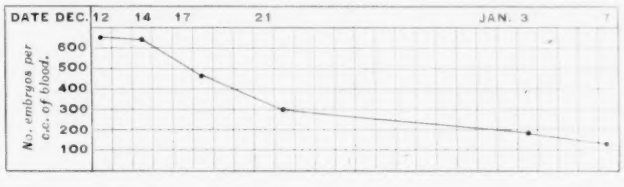


Fig. 2.—Chart showing the comparative numbers of microfilariæ in the peripheral blood at different times during the treatment.

December 31, urine was clear amber; no albumin by heat or acid test. It had been clear nearly four days.

January 3, urine was perfectly clear, pale amber, had been clear for a week. It had never been clear before since the patient's illness began in 1908.

January 7, urine was still clear; color pale amber; no albumin by heat or acid test.

January 12, urine had slight trace of albumin, reaction acid (Fig. 2).

January 14, urine was perfectly clear; no albumin.

The blood findings were also of interest. The number of microfilariæ in the peripheral circulation was not large even when the patient was first seen. The chart (Fig. 2) shows the comparative number of embryos found in equal sized drops of blood on the dates mentioned. The blood was always taken at night as with one exception (when a single embryo was found after a long search) the filariæ were absent from the blood taken in the day time.

The differential leucocyte count of Dec. 12, 1909, has already been given. On Jan. 7, 1910, the blood gave the following count:

Polymorphonuclear neutrophils	40 per cent
Lymphocytes	39 per cent
Large hyaline mononuclears	13 per cent
Eosinophils	8 per cent

Transitionals counted with polymorphonuclears.

5. Wherry and McDill: Jour. Trop. Med. and Hyg., Aug. 16, 1909, p. 241.

6. Each capsule contained five grains of quinin sulphate.

7. Twelve-inch coil; direct current; Wehnelt interrupter; 6¾-inch bulbs (Friedlander and Gundlach); distance from target *to table-top,* 15 inches; 3-inch vacuum which sometimes ran up to 6 or 7 inches during treatment.

On January 12 the embryos still persisted in the blood (taken at 2:30 a. m.) but in very small numbers, only one being found in 2 slides. No attempt was made to estimate their number per cubic centimeter. It should be said that the embryos were never found in the centrifugalized urine.

At the present writing (Jan. 24, 1910) the patient is very happy and encouraged and looks like a different man.[8]

In conclusion some of the interesting points connected with this case are as follows:

1. The apparent confirmation of the value of this method of treating filarial hematochyluria.

2. The absence of embryos from the urine even when the case was first seen.

3. The rapid decrease but persistence of a certain number of the microfilariæ in the peripheral night blood during the treatment.

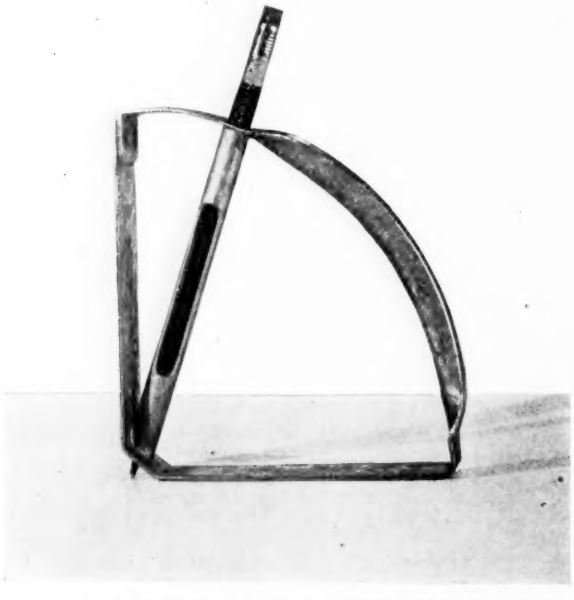
Only time can settle the question as to the permanence of the cure, and we hope that other observers will test our results. We have tried in vain to find another case before publishing these notes, but, failing this, have thought that the suggestions arising from our experience warranted our laying the account of the experiment before other workers.

1068 Broadway.

A PENCIL-HOLDER FOR TRACING OUTLINES OF LIMBS

JOHN RIDLON, M.D.
CHICAGO

It is often desirable to take the tracing of the outline of a patient's limbs for purposes of record, or for the use of the brace-maker. To carry the pencil in the hand in an absolutely vertical position, or with a uniform inclination, is impossible; the result of the attempt is an inaccurate and unsatisfactory outline. The device shown in the illustration makes it possible to obtain an accurate tracing, as the pencil-point is always in the vertical plane of the contour of the limb.



A pencil-holder for tracing outlines of limbs.

72 Madison Street.

8. An embryo was found after some search in his blood on the night of Jan. 24, 1910, so the microfilariæ still persist in reduced numbers. The urine is still perfectly normal. We hope to report on the case again at some future time.

AN ANOMALY IN SENSIBILITY DURING AN ACUTE SEROUS MENINGITIS

TOM A. WILLIAMS, M.B., C.M. (EDIN.)
WASHINGTON, D. C.

History.—The patient, a farmer, aged 61, was thrown from a trap when intoxicated, and during the next ten days gradually became delirious and quadriplegic, with rectal and vesical incontinence. He had been a hard drinker, and for two years had suffered from numb feelings and coldness of hands and feet without pain or loss of power.

Examination.—Ten days after the accident, when the patient was admitted to the Emergency Hospital, there was complete paralysis below the second thoracic segment and also of the right triceps innervation. Other arm movements were conserved although much impaired, especially distally. Facial and neck movements were strong. All reflexes were then absent with the exception of a slight dorsiflexion of the left great toe. In his delirious state the sensibility could be examined only incompletely, but it was clear that the right side was quite insensitive to pain and temperature as high as the second intercostal space, although no abnormality was then detected on the left side. Bedsores began to appear.

Disturbed Sensibility.—Five days later, after the deep reflexes had returned and the great toe had ceased to extend, there was detected the curious anomaly of dissociated sensation which I desire to record. On the left side as high as the second thoracic vertebra a sensation of coolness was immediately reported when the man was touched with an object at a temperature of 60 F., but when he was touched with a tube containing ice no sensation of cold was felt, the patient immediately calling out with pain, crying "it sticks." He could appreciate the painfulness as well as the temperature of a tube of boiling water, but felt no pain, although he distinguished the warmth, of a tube a little over blood-heat. There was marked hyperesthesia to pin prick and to deep pressure over this area. Light touches could be felt on both sides, although less easily on the right, especially distally. The sense of attitude was completely lost in both lower limbs, and appeared to be impaired in the upper limbs. Without going into further detail, although the case presents other points of interest which are reserved for a future communication with Dr. Carr, I wish to report that the failure to appreciate cold as such still persists on the left side, one month later, but the patient now declares that it burns. The hyperesthesia is less intense and the sensibility has now returned on both sides as low as the sixth thoracic vertebra. As to the etiology, I had believed the lesion a hematomyelia, but no blood was found in the cerebrospinal fluid, though it was reported that lymphocytes were abundant. The Noguchi reaction was negative.

Operation.—Dr. W. W. Carr, hearing of the cases of Murray of Boston and Victor Horsley of London, believed that a serous meningitis might be present, and resolved to operate eight days after the man's admission to the hospital. He selected the fifth cervical vertebra as the site of operation on account of a slight asymmetry there, although the æ-ray revealed nothing. No abnormality of cord or meninges was found, but about 6 ounces of serous fluid welled out when the bulging dura was incised.

The disordered sensibility was of a syringomyelic type as regards the right-sided loss to impressions of pain and change of temperature. But on the left side the pain and temperature impulses passed with increased facility and the patient's sensibility was only below the normal as to perception of extreme cold.

So far as this goes it conforms to what Head has described as a loss of protopathic sensibility; but in its completeness this comprises also loss of perception of high temperature and superficial pain as well. Moreover, its impairment is always due to peripheral nerve lesion, and never to interruption of afferent impulses within the central nervous system, where they are grouped into tracts, respectively, conveying (1) all forms of touch, (2) sense of attitudes, (a) conscious and (b)

unconscious, (3) all forms of pain, (4) in close proximity to the last and contiguous or intermingled, all perception of change of temperature.

This patient's anomaly does not conform to either the peripheral or spinal type; hence it is worthy of record, in order that other observations may furnish comparative data for the solution of what is at present a problem.

1758 K Street.

A RELIABLE TENDON SUTURE

EDWARD RISCHAR, M.D.

Assistant in the Laboratory of Operative Surgery and Surgical Anatomy of the Chicago Policlinic

CHICAGO

A reliable tendon coaptation by suture is assured by the following technic:

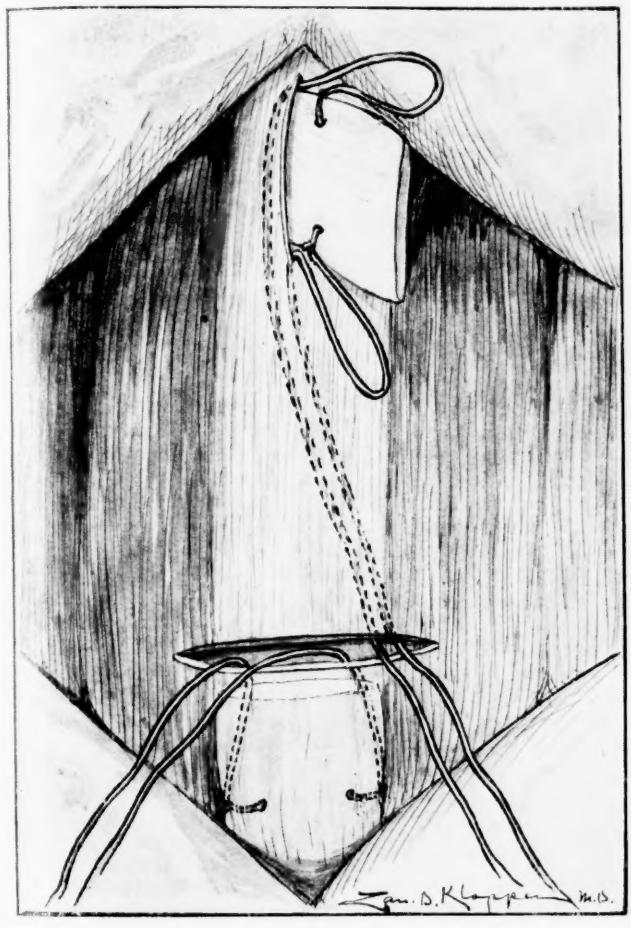


Fig. 1.—Showing side sutures inserted, to be used as tractors.

From within the tendon sheath bring a severed end of the tendon into the wound, with the least possible injury to the tendon. This is done by grasping its side with a small toothed forceps by which it is held until one of the side sutures is applied, which will then be used as a tractor until the opposite side suture is placed. These side sutures are placed about one-quarter of an inch from the stump, and grasp enough tissue to assure a secure hold for the intertendon sutures. They are firmly tied and left long, as shown in Figure 1.

Should one of the ends be so retracted as to be out of reach, which is often the case with the proximal end, place a probe in the sheath up to the tendon's stump. Cut the skin over the sheath to where the stump is found; then make an opening into it, bring out the stump, and apply the side sutures as shown in Figure 1.

Having the side sutures in both stumps, use their long ends to pull and hold the stumps in position until the intertendon sutures are placed. These intertendon sutures are placed behind the side sutures, and their knots to one end as shown in Figure 2.

The sheath is closed with fine catgut. The limb is put up in a relaxed position with perfect rest, which means wood, or, better, plaster splinting, for two weeks or longer, followed by gradually increased motion. It should be remembered that the result in tendon surgery is best without drainage; therefore, the field must be well prepared.

The advantages of the suture are:

1. It holds the tendon with absolute security and in position.

2. The major part of the tendon is unsutured, permitting early union.

3. The knots are placed where they cannot interfere with a good closure nor invite infection.

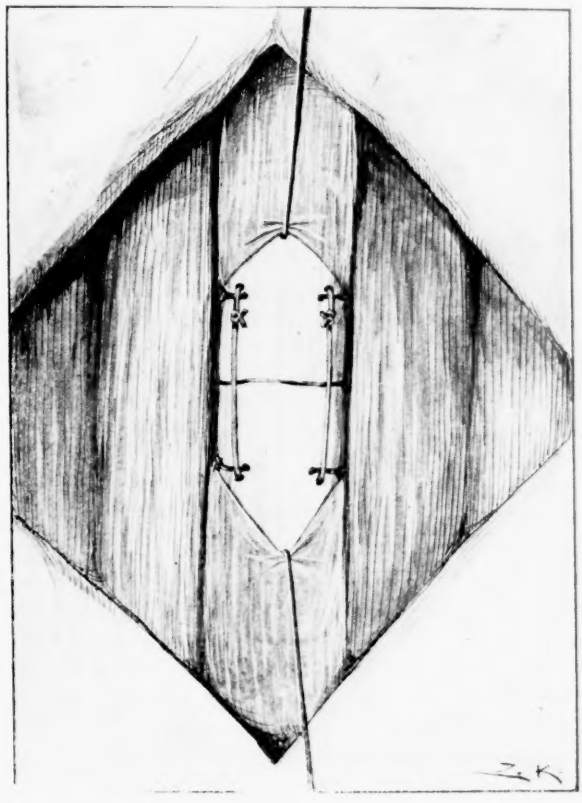


Fig. 2.—Showing intertendon sutures inserted behind side sutures and tied with knots distant from severed ends of tendon.

4. The method is precise, and for that reason can be carried out very quickly.

1316 Sedgwick Street.

Success of Mission Hospitals in India.—Dr. Frank Van Allen, an American missionary in Madura, India, writes that Hindus have contributed over $5,000 to the Albert Victor Hospital in that city, although it is a distinctively Christian institution. A few years ago such an occurrence would not have been dreamed of by missionary or Hindu, and it is a notable tribute to the character of the work done, which appeals to all regardless of religious preference.

A NEW SPIRAL TONSIL TENACULUM

WILLIAM WESLEY CARTER, A.M., M.D.
NEW YORK

Heretofore there has been no instrument on the market that will securely hold a soft, friable tonsil while it is being liberated from its pillars and while the snare or tonsillotome is being adjusted and used. The instrument here illustrated consists of two spirally curved prongs, flattened on the upper surface, each making the half turn of a screw; these are mounted on a long slender shaft having an octagonal handle.

Some of the chief points in favor of the instrument are the following:

1. It is simple, occupies little space, can be instantly engaged or disengaged by a half turn in either direction, and admits of either the snare or tonsillotome being used with the greatest facility after the tenaculum has been placed in position.

2. The traction area of the instrument, which may be described as that portion of tissue that lies vertically above the engaging parts of the instrument after it is placed in position, is the greatest possible within the small space occupied by the instrument, and since it engages the more resistant portion of the tonsil, the grip that it maintains is very strong.

3. The twisting action of the instrument tends to center the tonsillar tissue, thus pulling it away from the pillars and assisting in liberating it from the latter.

A new spiral tonsil tenaculum.

4. The points of the instrument are imbedded, and therefore sponging of the throat can be done without the disagreeable experience of getting the gauze caught on the instrument.

5. The instrument finds its greatest usefulness in removing soft, mushy tonsils and in submerged cases.

69 West Fiftieth Street.

PAROXYSMAL HEMOGLOBINURIA

A CASE PRESENTING CERTAIN INTERESTING CLINICAL FEATURES, WITH APPARENT CURE BY THE ADMINISTRATION OF CALCIUM LACTATE

HARRY W. GOODALL, M.D.
BOSTON

History.—The patient, a woman of French extraction, aged 30, had lived in New England for the past ten years. She had been always well and strong up to the time of the present illness. There was no history of syphilis or malaria. In the fall of 1905 after exposure to cold she was seized with a severe chill which lasted one hour. Similar chills occurred two or three times a week during the remainder of the winter, always after exposure to the cold. The following summer she was perfectly well. With the onset of cold weather in the fall of 1906 the chills recurred and were more frequent and more severe. During the summer of 1907 she had no chills but did not feel well, and complained of weakness and of being tired all the time. In the fall of 1907 the chills again returned. Exposure to the cold air was always followed by a chill. During this entire period the patient had paid no particular attention to the urine but at no time had she noticed anything abnormal.

Examination.—She was first seen Dec. 3, 1907, immediately after a chill. Examination of the urine voided soon afterward showed the well known characteristics of hemoglobinuria. Aside from a general brownish pigmentation of the skin, most pronounced about the neck and inner surface of the extremities, the physical examination was negative. This pigmentation had been first noticed one and a half years previously. Blood examination showed hemoglobin 70 per cent., whites 6,000, reds 3,600,000. A stained specimen showed moderate achromia, otherwise was negative. Systolic blood-pressure was 110 mm. Hg, diastolic 60 mm. Hg. The patient's weight was 120 pounds. She was under hospital observation from December 8 to December 20 inclusive. Typical chills were induced December 8, 9, 11, 12, 13 and 16 by allowing the patient to walk for half an hour in the cold air. Hemolysis was demonstrated after each chill, the blood serum giving the absorption bands of oxyhemoglobin. Hemoglobinuria, however, occurred only on the 11th and 16th. On the 11th four ounces of urine were voided one-half hour after the chill, which gave the absorption bands of oxyhemoglobin. Each subsequent specimen voided during the day was examined but hemoglobin could not be demonstrated. On the 16th three ounces of urine voided a half hour after the chill gave the absorption bands of oxyhemoglobin; one hour later three ounces were voided in which hemoglobin could not be demonstrated; two hours later four ounces of bright red urine were voided which gave the absorption bands of methemoglobin. Each subsequent specimen voided during the day was examined but contained no hemoglobin.

Treatment and Course of Disease.—The administration of four grains of calcium lactate four times a day by mouth was begun December 17. The following three mornings the patient was exposed to the cold air as previously but had no chills and the blood showed no hemolysis. On December 20 she was given Fowler's solution in increasing doses. On December 25 she had gained 5¼ pounds and felt perfectly well. On Feb. 4, 1908, she reported that she had had a severe attack of grip. From December 27 to January 1 there was no recurrence of the chills. The patient's weight was 127½ pounds; systolic blood-pressure 122 mm. Hg, hemoglobin 95 reds, 5,200,000. On May 11, 1909, in reply to a letter the patient stated that she had had no recurrence of the chills and had been perfectly well. Since this date it has been impossible to learn where the patient is.

Vincent† and Deaderick‡ report favorable results from the use of calcium lactate in cases of hemoglobinuria.

213 Beacon Street.

SARCOMA OF THE PROSTATE *

C. L. GIBSON, M.D.
Surgeon St. Luke's Hospital; Consulting Genito-Urinary Surgeon to the City Hospital
NEW YORK

This disease is fortunately rare, as so far it has defied all the resources of the surgical art to relieve it. It is not quite so rare, however, as a perusal of the literature would seem to show, because the various statistical observations of accepted value have wisely refused to admit cases not backed up by a definite microscopic examination. As the great majority of these cases are unamenable to surgical treatment, and autopsies, particularly in this country, are difficult to obtain, suitable material for microscopic examination will only exceptionally be available.

When I reported my first case to this Association in 1904,[1] I could find only one extensive tabulation of authentic cases, 24 in all.[2] Powers[3] would accept only 23 cases, including his case and mine.

The latest observation by Proust[4] tabulates 34 authentic cases and 14 probable. This list is obviously incom-

† Vincent: Compt. rend. Soc. de biol., Dec. 16, 1905, p. 633.
‡ Deaderick: Jour. Trop. Med. and Hyg., 1907, x, 393.
* Read before the American Association of Genito-Urinary Surgeons, May 31, 1909.
1. Paper was not published.
2. Socin: Deutsch. Chir., 1902.
3. Tr. Am. Surg. Assn., 1907.
4. Ann. d. mal. d. Org. génito-uria., May 15, 1907.

plete and does not contain Powers' case nor mine of 1904.

It is not necessary to demonstrate by more extensive references to the literature that the disease is uncommon. We should be on the alert to discover its existence at an early stage, using, if necessary, extraordinary expedients, such as exploratory incision, in order to remove the disease radically at a period when it is confined to the prostate. As most of the cases occur in young individuals, any unusual size of the prostate or otherwise unexplainable obstructive symptoms should bring the possibility of this tumor to our minds.

CASE 1.—*History.*—My first case was that of a man, aged 35, referred to me by Dr. P. R. Bolton, who had operated on him at the New York Hospital in 1904, removing from the prostate an intravesical projection which had greatly interfered with evacuation of the bladder. The portion removed was reported by the pathological laboratory to be a small round-cell sarcoma of the prostate.

Examination.—The tumor of the prostate grew rapidly and the patient came under my care at St. Luke's four months after the previous operation. Rectal examination showed a diffuse, even, firm mass the size of a small fist occupying the prostatic region.

Operation.—The prostate was removed *en masse* with the neck of the bladder by a combined suprapubic and perineal operation, but the patient succumbed to increasing exhaustion. No autopsy.

CASE 2.—*History.*—G. G., aged 36, married, Italian laborer, was admitted to St. Luke's Hospital, Nov. 10, 1907, referred by Dr. M. J. Echeverria. There is no history of venereal disease.

Present Illness.—About two months before admission the patient began to notice pain in the lower abdomen, somewhat more marked on the right side, pretty constant, with occasional exacerbations. Urination was frequent, particularly at night. The patient had trouble in starting stream, and had to strain to empty bladder. There was also some scalding sensation. The urine was often cloudy, but blood was absent; there was no urethral discharge. The patient was constipated. There was loss of weight and strength.

Examination.—There was abdominal distention below the umbilicus. A mass could be felt extending from the umbilicus well down into the pelvis, which was hard and not freely movable. There was a retained left testicle. Rectal examination showed the axis of the rectum deflected to the right. An irregular mass, the size of the fist, hard and immovable, replaced the prostate. A soft catheter passed easily, withdrawing an ounce of residual urine. There was slight elevation of temperature and pulse. Blood examination showed 9,900 whites; polynuclears 80 per cent. Urine examination varied, but usually showed blood and albumin.

Operation.—November 15 exploratory operation was made to determine whether radical removal might be feasible; but it was found that the mass involved the other pelvic contents to a degree that made removal impossible. A fragment was removed for microscopic examination. Suprapubic drainage was instituted for prophylaxis of developing obstruction.

Postoperative History.—The growth of the tumor was very rapid; but the patient was now free from pain. Coley's fluid was used without appreciable results. The patient died of general exhaustion; the tumor mass then nearly filled the abdomen.

Pathologic Report.—By Dr. F. C. Wood. Macroscopic examination: Specimen consists of several small pieces of tissue removed from tumor of the prostate. Microscopic examination: Sections show a small round-cell sarcoma which is moderately vascular. The cells are regular in outline, not closely packed together, but separated by considerable intercellular stroma. Mitoses are frequent.

NUMBER OF AUTHENTIC CASES

Analyzing the cases tabulated by Powers and Proust, eliminating those in the latter's table which are not accepted by Powers, we have 32, namely:

Rose	2	West	1
Socin	3	Stein	1
Tordens	1	Hughes (Wharton)	1
Kaufmann	4	Burckhardt	1
Birch-Hirschfeld	1	Verhoogen	1
Schaleck-Bayer	1	Marsh	1
Ley	2	Mathias	1
Spanton	1	Botesen	1
Hind	1	Gibson (first case)	1
Van der Hoeven	1	Stern	1
Grattzer	1	Powers	1
Barth	1		32
Oleva	1		
Guyon (Proust)	1		

To these must be added Cabot's second case[5] (J. K., aged 15, operated April 21, 1904; tumor examined by Dr. F. W. Whitney and found to be a small spindle-cell sarcoma) and Gibson's second case.

Bobbeo (Turin) reports a case with autopsy and microscopic examination.[6]

Depage[7] successfully removed a prostate weighing 650 grams from a man of 25. Microscopic examination showed small, round-cell sarcoma.

These are the absolutely authenticated cases, numbering 36.

8 East Fifty-eighth Street.

THE ETIOLOGY OF THE TYPHUS FEVER (TABARDILLO) OF MEXICO CITY

A FURTHER PRELIMINARY REPORT*

H. T. RICKETTS, M.D.
AND
RUSSELL M. WILDER
CHICAGO

Some months ago[1] we reported an experiment in which the virus of typhus, as it exists in the diluted serum of the patient, failed to pass through a Berkefeld filter. The monkey which received the unfiltered serum, exhibited a severe course of fever after an incubation period of five days, whereas the animal which received the filtered serum developed no fever and remained perfectly well.

The immunity test, which has not been reported heretofore, confirmed the conclusion that the virus did not pass through the filter. This test, which was given about one month following the "filtration experiment," consisted of the intraperitoneal injection of 7 c.c. of diluted defibrinated blood drawn from a human patient on the tenth or eleventh day of his fever. No. 3, which had tolerated the filtered serum without visible disturbance, showed a course of high fever lasting eleven days, and preceded by an incubation period of seven days, as the result of the immunity test. The animal which had received the unfiltered serum died as a consequence, and of course, no immunity test could be given.

This experiment has been repeated with a similar result. No. 19, which received filtered serum, showed no signs of infection, whereas No. 18, which was given unfiltered serum, passed through the customary incubation period followed by a severe course of fever.

Anderson and Goldberger[2] obtained a similar result.

It seems, therefore, that the evidence is sufficiently strong that the virus of tabardillo does not pass through

5. Cabot, A. T.: Papers on Genito-Urinary Surgery. Boston, David Clapp & Son, 1907.
6. Centralbl. f. Chir., 1909.
7. Jour. d. chir., Bruxelles, 1908, p. 372.

* From the University of Chicago (Department of Pathology) and the Memorial Institute for Infectious Diseases, Chicago.

1. THE JOURNAL A. M. A., Feb. 5, 1910, p. 463.
2. Anderson and Goldberger: Pub. Health Rep., Feb. 18, 1910.

a filter of the type mentioned. This being the case, the result may be taken as offering a suggestion in regard to the probable or approximate size of the virus. It seems not unlikely, in view of its non-filterability, that the micro-organism is of such size that it should be susceptible to observation microscopically, provided its tinctorial affinities and density are favorable.

Prompted by this probability, we have been engaged in a careful search of the blood of patients for the presence of micro-organisms, correlating our findings with the microbic content of the organs of the body louse, which has the power of carrying the disease. It will be apparent that the results do not prove that the organism to be described is the cause of typhus, but to our minds they have a suggestive value which is sufficient to render their preliminary presentation justifiable. They may be stated briefly as follows:

1. In the stained (Giemsa) preparation of the blood of patients, taken on from the seventh to the twelfth day of the disease, we invariably have found a short bacillus which has roughly the morphology of those which belong to the "hemorrhagic septicemia group." Usually it appears to stain solidly, but on minute examination an unstained or faintly stained bar is seen to extend across the middle. Occasionally two organisms are seen end to end. Exact measurements have not been made, but when compared with the size of the erythrocyte, their length is estimated at hardly more than two micromillimeters, and their diameter at about one-third this figure. Certain other bodies, the identity of which is not so clear, may represent degeneration or involution forms of the above. They consist of two stained granules, connected by an "intermediate substance," which is stained faintly blue or not at all. Frequently one of these granules, or "poles," is larger than the other and stained a deep purple, whereas the smaller takes a faint blue color.

2. In moist preparations of the blood of patients, bacillary bodies, with a structure like that mentioned above, have been encountered in all cases. The differentiation of the forms into two halves, separated by a line or narrow zone of a substance of different refractive power, may be observed. They possess no active motility, but vibrate more or less rapidly.

3. The dejecta and various organs of a large series of lice have been stained in a similar way and examined for the presence of micro-organisms. Certain groups had been deliberately infected by permitting the lice to feed on patients, while others were supposedly normal, having been collected from healthy individuals. Streptococcei, staphylococci, an oval bacillus occurring in clusters, and certain solid staining bacilli are encountered irregularly and indifferently in the feces and intestinal contents of both "normal" and "infected" lice. Polar-staining organisms have been found occasionally in the feces, and intestinal contents of "normal" lice, whereas they are present almost constantly, and often in large numbers, in similar material from "infected" individuals.

Protozoa have not been recognized. Micro-organisms are encountered occasionally in preparation of the salivary glands, ovary, eggs, and testes of the louse. Further study is needed to determine whether they are present in these tissues as a result of faulty technic, or not.

TECHNIC

Probably no field of microscopic research is more exposed to errors and misinterpretation than the search of the blood for micro-organisms of an unknown character. We shall not at this time consider the many sources of confusion which are inherent in the blood itself, and in methods of its preparation. Naturally we have attempted to avoid being led astray by these conditions. Accidental contaminations from outside have been guarded against carefully. Slides and cover-glasses were cleaned in sulphuric acid and potassium bichromate, washed in freshly distilled water and preserved in absolute alcohol. The latter was removed by freshly laundered linen just prior to making the preparations. Forceps previously flamed were used in manipulating the glass. The water employed in diluting the Giemsa stain was distilled, then filtered, autoclaved and preserved in small flasks, which had been cleaned and rinsed repeatedly with filtered water. Preparations of the blood were covered at once to avoid contamination from the air. The blood was taken from the ear after the latter had been scrubbed with green soap and absolute alcohol by means of sterilized cotton.

FREQUENCY OF THE BACILLI IN THE BLOOD

The organisms described have been found to be more numerous in the blood within three or four days prior to crisis than before this period. In comparison with the frequency with which the organism of malaria and trypanosomiasis are encountered in the blood of patients the bacilli would be considered quite rare. It is rare to recognize a bacillus short of one trip across a three-fourths-inch cover-glass, and frequently it is necessary to cover this distance two or three times. This is true of both the stained and the fresh preparations. A rough, and naturally inaccurate, idea of their number may be obtained from the consideration that 0.01 c.c. of blood made from fourteen to twenty-four smears on the three-quarter-inch cover-glass, as determined in two observations. With the 2-millimeter apochromatic objective of Zeiss and with the No. 6 compensating ocular, and with the tube drawn out to 16 millimeters, it is required to traverse the preparation from 80 to 90 times in order to observe the entire surface of one cover-glass. Hence one might expect, roughly, to find from 300 to 2,000 bacilli in 0.01 c.c. of blood.

In the intestinal contents of the "infected" louse, it is occasionally necessary to search for three or four minutes before bipolar organisms are found, but in most instances organisms of this type are much more numerous in the intestine of the "infected" louse, and fifteen or twenty may be found in a single field.

It has occurred to us that the segmented bacilli observed in the blood may be identical with the bipolar forms, which are found in the intestinal contents of the louse. The differences are not greater than those which are encountered in the known organisms of this type, such as the plague bacilli and that found in association with Rocky Mountain spotted fever.

THEORETICAL CONSIDERATIONS

Considering that typhus is an insect-borne disease, the first thought in regard to its microbic etiology would naturally involve an organism of protozoan character, on the basis of analogies which are known to all. Yet our knowledge of the rôle of the flea in the transmission of the bacillus of plague, of the tick in South Africa in carrying the spirillum of tick fever, and of the same insect in carrying the bacilli which are associated with Rocky Mountain spotted fever, should leave us without prejudice regarding the etiology of some other insect-borne disease. It seems, therefore, that our minds should be open to conviction in relation to a bacterial cause for typhus as well as protozoan.

There are, in addition, at least two features of typhus which would suggest a bacterial rather than a protozoan cause.

The first consists of the fact that typhus is an acute self-limited disease, in so far as clinical evidence can show. This condition is more in harmony with a bacterial rather than a protozoan cause, inasmuch as the protozoan diseases, in so far as their etiology has been determined, are chronic in character, provided the animal survives the initial acute attack.

A second condition which suggests bacterial etiology consists of the fact that one attack of typhus, at least in the monkey, confers immunity to further inoculations. It is true that not all bacterial diseases confer such immunity, but it is equally true that immunity is not recognized as a distinctive feature of protozoan infections.

If we may be permitted to resort to another analogy, some ground may be found for the theory that typhus is caused by an organism of the "hemorrhagic septicemia group" of bacteria. This relates to the fact that typhus actually is a hemorrhagic septicemia from the clinical and experimental standpoints, and that it has certain points which are distinctly common to plague and Rocky Mountain spotted fever, both of which may be classed as hemorrhagic septicemias. We are inclined to consider, therefore, that the three diseases mentioned constitute a group of human "hemorrhagic septicemias."

We are aware that others have described organisms more or less similar to the one we have considered in relation to typhus, but in so far as we know they are organisms which are susceptible to cultivation by ordinary means. Gavino and his assistants in Mexico City and Anderson and Goldberger have failed to cultivate an organism of any type from typhus, and this has been our experience also. We consequently conclude that the organism we described is not susceptible to cultivation under ordinary conditions. This is corroborated by the fact that two experiments failed to yield an organism of this type from the intestinal contents of the louse.

It is the purpose of this paper to present the observations and the theoretical considerations which have been mentioned solely because of their suggestive value. It is clear in our minds that the grounds are not sufficient for claiming an etiologic rôle on the part of the organism described, yet the conditions under which they are found, together with the theoretical argument presented above, appear to demand that they be taken somewhat seriously and subjected to further study in their relationship to typhus.

We desire to express our obligations to the Department of Public Instruction of Mexico; to Director Gaviño of the Bacteriologic Institute; to the authorities of the General Hospital; and particularly to Dr. Escalona, for their numerous courtesies.

The Professional Anesthetist.—To the patient the professional anesthetist is of inestimable value for he relieves the surgeon totally of the worries of the anesthetic and permits him to give all his attention to the operation. To the surgeon he gives a feeling of confidence which knows no value. Due to his experience and skill, the professional anesthetist can usually learn the anesthetic characteristics of the patient. He knows when it is advisable or necessary to administer hypodermics of strychnin, morphin, scopolamin or atropin. He knows what preliminary anesthetic it is best to administer and what general one should follow, how to avoid the dangers when it becomes necessary to change from one anesthetic to another.—E. Metzenbaum, in *Ohio State Medical Journal.*

LOCAL ANESTHESIA WITH QUININ AND UREA HYDROCHLORID

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The following report of an experience with the bimuriate of quinin and urea hydrochlorid may prove of some value to surgeons doing abdominal work, especially in cases in which general anesthesia is undesirable.

History.—Strangulation of an old inguinal hernia occurred, March 10, in a negress, aged 64, who had, in addition, inoperable cancer of the uterus and rectum. The circulation was poor. There were arrhythmia, edema, considerable arterial sclerosis, beginning dilatation of the heart; slight cough, some pulmonary secretion and a parenchymatous nephritis.

Operation.—Immediate operation was necessary and both physicians called in consultation thought that general anesthesia would almost certainly prove fatal. The operation was done under local anesthesia, induced by injecting a 0.25 per cent. solution of quinin and urea hydrochlorid. The tissues above the canal were moderately infiltrated with the solution, and there was no pain until after the canal was laid open, when the peritoneum was found to be quite sensitive. About 2 drams of the warmed solution was poured into the canal and in a few minutes there was perfect anesthesia of the parietal peritoneum and the operation was finished without the patient at any subsequent time feeling any pain, although considerable adhesions were broken up. There was no local reaction in the peritoneum, union was primary and there was no shock. The fluid poured into the canal gradually escaped into the abdomen as the adhesions were broken up. There was no pain after the operation and nothing to indicate that any peritoneal irritation had taken place.

While it is dangerous to draw conclusions from a single case, this report is at least worth attention and suggests that the solution might be poured into the abdomen and more extensive operations done without pain or injury to the patient, as the presence of the solution seems to render the handling of the abdominal viscera painless.

Therapeutics

HYPERTENSION

Increased arterial tension is probably always the incipient stage of arteriosclerosis and a more or less prolonged condition before the ever-increasing cardiovascular-renal disease is actually in evidence. Deaths from one end of this tripod, viz.: cardiac, arterial, or kidney lesions, are on the increase in civilized countries, and especially in America. Increased arterial tension, at first intermittent, then more or less persistent, is a forerunner of the disease that is really one that should be only that of old age. The age of apoplexy is growing younger. Valvular disease of the heart without previous history of tangible cause, such as inflammatory rheumatism, chorea, diphtheria, or other infection, is markedly on the increase, and chronic nephritis is climbing up the scale of frequency of the causes of death, especially in cities.

The recognized causes of early hypertension, and later arteriosclerosis, are severe infections, septic processes, typhoid fever, syphilis and the necessary prolonged use of mercury, and chronic lead poisoning, which is now rare. Causes that are not generally recognized are nervous hypertension, which is due to the excessive rapidity of our lives (most especially of men, but also of women); and chronic nicotin poisoning, which is occurring more and more frequently because, although a larger percentage of any gathering of men than ever before do not smoke at all, of the men who do smoke more

smoke excessively, at least excessively for their ability to withstand the drug. In other words, nicotin plus high nervous tension causes more harm than nicotin did years ago without the nervous tension. Another often not recognized cause of hypertension is gout with its probable manifold causes and manifold signs, often so intangible as to be elusive. The varying causes of gout and the causes of hypertension without gout are so closely associated as often to baffle separation.

Imperfect thyroid secretion and increased suprarenal secretion would both tend to hypertension, but the strongest element of all is the strenuosity of life in the present era. A decreasing cause of hypertension is the overuse of alcohol, while an increasing cause is athletic competition among growing boys and young men.

The symptoms of hypertension are headaches or at least fulness of the head, slight, infrequent dizziness, a tendency to flushing, or at times a slight hyperemia of the skin, especially after the part has been irritated, irritability of temper, sometimes sleeplessness, and increased frequency of urination. Perhaps these are the only symptoms unless there are some due to the cause of the condition, viz.: if the cause is nicotin, there will be the symptoms of overuse of nicotin, etc. The pulse tension will be noted too high by the finger, but is demonstrably found too high by the sphygmomanometer. This is the stage when cardiovascular-renal disease may be postponed or perhaps actually prevented.

The next stage, and this only after months and perhaps even several years of the continued hypertension, will give symptoms referable to the heart, to the arteries, or to the kidneys, or, perhaps, will give combined symptoms from all three. The most frequent noticeable secondary symptoms of the present day are increased rapidity of the heart and dyspnea on slight exertion, some enlargement of the heart, possibly a soft, systolic blow at the apex showing a weakening of the mitral valve, or a slight systolic roughness at the aortic valve showing a stiffening of this valve, as these valves suffer the most from hypertension. Cardiac pains may occur and there may be more or less frequent attacks of "acute indigestion." The rapidity of the heart does not normally lessen on first lying down; in fact, there may be a palpitation and a noticeable uncomfortable activity of the heart. The primary enlargement of the left ventricle, then some slight weakening of the muscle and perhaps an insufficiently closed mitral valve are all well understood when the physical conditions are reviewed.

Dr. Curran Pope, in the *Monthly Cyclopedia and Medical Bulletin*, January, 1910, numerically presents the physics of the circulation. Computing the amount of blood passed through the heart of an average adult man, "the heart, beating at the rate of seventy times a minute, i. e., 4,200 times an hour; 100,800 times daily; and 36,792,000 times annually, would pump on an average two and one-half ounces of blood at each contraction, 175 ounces a minute, 656¼ pounds an hour, or 7½ tons a day," which Pope believes "is equivalent to lifting one ton 122 feet high."

As 30 pounds of blood go through the normal adult heart each three minutes, if the tension of the arteries is increased even 10 mm., to say nothing of 20, 30 and 40 mm. above normal, the amount of extra work that the left ventricle is called on to do can be realized, this increased pressure increasing the resistance to the flow of arterial blood just so much. It is no wonder, then, that with increased blood pressure, whatever be the cause, the heart sooner or later pays the penalty. The disturbed circulation is for some time unnoticed because at first it is an internal disturbance, the dilatable blood vessels of the abdomen being the ones most easily congested by imperfect circulation. This soon causes congestion of the abdominal organs, impaired digestion, and the absorption and circulation of toxins that are irritant to the kidneys and arterial walls.

The principal thing in the prevention of the development of cardiovascular-renal disease after hypertension has been discovered is that the patient, or rather the individual who is not yet even a patient, be made to realize the danger of the condition and what the future means to him if the hypertension is not reduced. This is so very true because nothing that the physician can do will counteract lack of cooperation on the part of the individual. It is he who must take rest, mental and physical; it is he who must take vacations. He must stop excessive eating and drinking of any kind, even if he is not put on an absolutely limited diet. He must reduce, if not actually stop, his tobacco and alcohol if he uses either or both. He must reduce or stop much tea and coffee, and it may not be wise even for him to drink water excessively, as adding so much more work for the circulation. He should realize that he is a subject under scientific observation by his physician, even if he does not tolerate the title of patient.

There can be no dogmatic decision as to what blood pressure is proper for any class of patients. Each patient must be individualized, and the blood-pressure found the best for him should be the one at which it is aimed to keep the circulation. As well pointed out by Sir Lauder Brunton (*British Medical Journal*, July 10, 1909), some persons feel well and are able to work at a tension of 100, while others are absolutely prostrated by such low tension; some feel fine, agile and stimulated by a pressure of 160 and over, while others feel uncomfortable from such high tension. Brunton believes, as is generally recognized, that a tension of 180 mm. or over is always dangerous, while it is generally found that a tension of 100 or under causes lassitude and even debility. However, it seems very important, as just stated, that each patient should be individualized, as an attempt to reduce a high pressure to the normal for the age and sex of the individual is often followed by unpleasant consequences; and the reverse is demonstrable, that when a low blood-pressure is raised too high by vasoconstrictors and cardiac tonics uncomfortable and sometimes dangerous symptoms occur.

All this emphasizes the importance of taking the blood-pressure in every instance of circulatory disturbance and letting the findings decide the treatment, medicinal and dietetic. It is also necessary for perfect management of the patient to take the blood-pressure frequently to see what results are being obtained by the treatment, or whether unpleasant results are occurring. With arteriosclerosis and a weak heart muscle it would seem unwise to give cardiac depressants, although the blood-pressure might be high on account of the difficulty of compressing hardened arteries with the blood-pressure instrument. Repeated observations should be made of heart strength and peripheral circulation before circulatory tonics are given, on the one hand, or circulatory depressants, on the other.

The actual treatment consists in removing any cause for hypertension that can be removed, such as nicotin, alcohol, perhaps coffee and tea (especially if large amounts are taken), excessive amounts of meat or quantities that are unwise for the individual patient, nervous strain, speed, severe athletic work, sudden severe muscular exertion, such as running for a train or car, crank-

ing an automobile or propelling a bicycle uphill. As above stated, one of the most important causes to be removed, if possible, is nervous tension.

An important cause of the condition and a cause that must be remedied is intestinal putrefaction or fermentation, as evidenced by constipation, irregular diarrheas, excessive amount of intestinal gas, and indican in the urine. Constipation should be remedied by the laxative considered best for the individual patient. Bowel antiseptics to be taken any length of time are inadvisable, even if partially successful. Various lactic acid and sour milk preparations may be of marked benefit and may be tried (THE JOURNAL, March 12 and 19, 1910). The most successful means of removing putrefaction of the intestines is by total abstinence from meat and flesh of all kinds. Whether this is advisable in a given patient cannot be determined offhand. The radical substitution of a large amount of vegetables and cereals may cause more gastric and upper intestinal indigestion than is compensated for by the prevention of some of the large intestine disturbance. Generally it will be found best to allow meat at least once a day or possibly twice a day in small amount, and the amount of fruit, vegetables and cereals that tend to keep up nutrition and not cause indigestion. The main fact seems to be that most men under high tension eat rapidly and too much, improperly masticate their food, and drink liquids rapidly, hustle immediately after a meal has been taken, and thus cause intestinal and perhaps gastric indigestion. A correction of this bad habit of eating often alone corrects intestinal disturbances.

The next important necessity and requirement for the prevention of cardiovascular-renal disease is a proper action of the skin and a good circulation in the muscles and surface of the body. Gentle exercise, whether in gymnasiums or at home, by walking or by golf, depending on the individual, will increase muscle and skin circulation and reduce blood-pressure. Warm baths frequently, Turkish baths occasionally, or, better than all hydrotherapeutic measures, body-baking occasionally, will ordinarily reduce the blood-pressure, and if the regulation of the life and habits of the individual have been changed will tend to keep the blood-pressure down for months, if not for years. Massage is not ordinarily required for these active patients whose treatment is now being considered.

It has been repeatedly pointed out in this department of therapeutics that a large amount of water drunk with the intent of removing toxins from the blood, of preventing gout, and of preventing uric acid disturbances and gall-stone deposits is not necessarily valuable and may be a serious regimen for the circulation. This is true if the heart muscle is weak; it is often very true if the kidneys are slightly deficient; and it seems inadvisable when there is hypertension of the arteries. As stated by Dr. Boardman Reed (*California State Journal of Medicine*, September, 1909) excessive amount of any simple food and any simple drink, as water, to say nothing of spring waters, may cause more harm in a patient who has hypertension than a small amount of meat and a small amount of tobacco, tea, coffee, and even alcohol.

Pope (*Monthly Cyclopedia and Medical Bulletin*, February, 1910) suggests electric-light-bath treatments, and recommends the high-frequency electric and static wave currents as all of advantage in lowering the blood-pressure and increasing peripheral circulation. He does not find that the galvanic, faradic and sinusoidal currents are of value. Boardman Reed, on the other hand, thinks gentle faradic electricity is of benefit, and both think mechanical vibrations, especially along the region of the spinal muscles, tend to cause a lowering of pressure.

There can be no question of the advantage of a warm, equitable climate over a severe cold one or one that is subject to frequent rapid changes of temperature for the patient who has hypertension. However, it will be rare that a patient in the early stages of cardiovascular-renal disease can be induced to give up the work of his life for any more than temporary sojourns in distant climate. This emphasizes the fact, however, that such patients, as often as they can take vacations, should go to a region that tends to promote the peripheral circulation.

As pointed out repeatedly for many years by Dr. O. T. Osborne of Yale, any diminution in thyroid secretion tends to raise the blood-pressure, and any increase of suprarenal secretion tends to raise the blood-pressure. Therefore the deduction of the value of small doses of thyroid in hypertension. Thyroid secretion is Nature's method of keeping the blood-pressure normally low, and in hypertension small doses of thyroid extract daily for some time will not only lower the blood-pressure, but stimulate the thyroid gland to more perfect secretion. The dose should not be more than from 0.10 to 0.20 gram (from 1½ to 3 grains) of the official preparation a day. Small doses of iodin, as offered by an iodid, tends to cause the same lowering of blood-pressure, perhaps by the action of the iodin itself and quite supposedly by the stimulant action of the iodin on the thyroid gland. Certain it is that small doses of iodid, preferably sodium iodid, and not more than 0.10 to 0.20 gram (1½ to 3 grains), twice a day, is sufficient to stimulate the thyroid and to cause, after two or three weeks, a distinct lowering of blood-pressure. A thyroid gland once made more active may remain so for months without thyroid or iodid medication, and the blood-pressure may remain low for months, provided the other conditions of life have been properly regulated.

The administration of alkalies as exemplified by sodium bicarbonate and as presented by a larger vegetable diet causes a lowering of the blood-pressure and promotes nitrogen metabolism and elimination, but alkaline drugs should certainly not be long administered. In fact, the prolonged use of any drug is inadvisable in simple hypertension. They may be necessary when arteriosclerosis and cardiac debility are present.

The actual vasodilators, i. e., the nitrites, will most certainly cause active lowering of the blood-pressure, and to accomplish this it is not necessary to give large doses. Although their action is rapid and the apparent results of such action theoretically and laboratorily are short-lived, still the administration of a nitrite three or four times in twenty-four hours tends to and does keep the blood-pressure lower. The most used nitrite for this purpose is nitroglycerin, and the most used dose is probably 1/100 of a grain. However, 1/200 and even 1/400 of a grain in many patients will keep the blood-pressure lower than without it and may cause it to be lower than is agreeable to the patient. If taken after meals or with a large drink of water to cause slow absorption it will not cause flushing of the face or headache. The nitrite of sodium in even so small a dose as 1 grain three times a day, after meals, will often have even a more satisfactory action than nitroglycerin. Sir Lauder Brunton suggests the administration of "10 grains of potassium nitrate, 10 grains of potassium bicarbonate, and from ½ to 2 grains of sodium nitrite, in powder, dissolved in a glass of some hot aperient water, as tending not only to be laxative, but to keep the blood pressure down, and this may be continued daily for years."

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THE AMERICAN MEDICAL ASSOCIATION—ITS POLICIES AND ITS WORK

VI. THE CHEMICAL LABORATORY

To those who have given the matter any thought it must seem remarkable that until the establishment of the Council on Pharmacy and Chemistry five years ago there was no disinterested, reliable body to which physicians could apply for information regarding proprietary—or for that matter regarding any—medicinal products. That a physician had no means of obtaining unbiased scientific data on the preparations he was using daily in the treatment of disease seems on its face an anomaly. Such was the case, however, and the result was that all information concerning proprietary medicines had to come from those who were commercially interested in their sale. That information from such a source would be so biased as to be well-nigh worthless for scientific purposes might have been expected; that it *was* worthless has been demonstrated.

By far the most important work of the Council has been that of determining the actual composition—as distinct from the alleged composition—of proprietary medicines. To do this work, careful and painstaking chemical analyses were essential, and for such analyses the Council had to depend either on its own members or on chemists connected with commercial laboratories. The arduous duties connected with such work, which of necessity had to be of the most careful and painstaking nature, made it impracticable to expect the chemists on the Council to do it themselves; it was also found unsatisfactory to have it done in commercial laboratories. To meet these difficulties the Council on Pharmacy and Chemistry in its annual report (1906) to the Board of Trustees of the American Medical Association made the following suggestion: "It is hardly necessary to remind you that there is much detail of a chemical nature connected with this work, and while some of the members of the Council have been devoting much time and labor in this direction it is believed that some of this detail work could be done much more satisfactorily if facilities for it were provided by you at the Association's building. Therefore, the Council begs to suggest that if it is possible to do so, a chemical laboratory be established by the Association with a competent chemist in charge. There is a great amount of work to be done, and it is work that must be continued if the medical profession in the future desires to protect itself from unscrupulous promoters."

The Board of Trustees gave the matter careful consideration, and while it fully realized that the establishment of a well-equipped laboratory would entail no small expense, it decided that the crying need for such an institution amply justified any reasonable expenditure. The Board made an appropriation, therefore, and ordered that a portion of the Association's building should be fitted up as a chemical laboratory. This was done, and a space twenty feet deep and the entire width of the building was set aside for laboratory purposes and all the apparatus necessary for analytical chemical research was installed.

The Board was fortunate in being able to secure, to take charge of the laboratory and to act as secretary to the Council, a chemist, who not only ranked high in his profession, but whose familiarity with the conditions and practices of pharmacy and of pharmaceutical manufacturing made him an invaluable asset to the Council's work. As the scope of the laboratory's work widened, one chemist was added to the staff, and, later still, another. Both of these men are expert chemists, one holding the highest degree given by a university whose department of chemistry ranks among the best in the country; the other, also a graduate of one of the leading universities of the country, has done extensive analytical work in the Bureau of Chemistry of the Department of Agriculture at Washington. Thus the Association has at its command chemical and pharmaceutical talent of the highest grade—an item of importance when it is realized how critically the work of the laboratory is examined by those interests whose shortcomings are exposed. In this connection it is worth while to call attention to the fact that, in all the work which the laboratory has done its results have practically never been successfully challenged—a record of which the medical profession may justly be proud and one, too, that is indicative of the grade of work accomplished.

Good apparatus and expert chemists, however, are by no means all of which the laboratory can boast. A most comprehensive and complete reference library containing the latest and best books on chemistry, pharmacy and the allied sciences has been collected, and every important pharmaceutical and chemical journal published in any language is also to be found there.

The average reader may not at first glance appreciate all that this means. It means that the latest and most reliable data concerning new drugs—proprietary or otherwise—from all parts of the world are now at the disposal of the medical profession of America. The larger manufacturing houses have long realized the value of such data for purely commercial purposes and they have been careful to keep in touch with what was going on outside this country and were ever on the watch for anything new which might develop and which could be used by them. Physicians, however, have been among the last to learn the facts regarding new remedies; the information which manufacturers collected so zealously for themselves was not allowed to trickle out among the medical profession until it had been colored, flavored and sophisticated, often out of all likeness with the original, but always into apparent praise of the preparations marketed under trademarked names.

The laboratory has, then, both the equipment and the personnel requisite for the production of the highest type of analytical work. But it has more than this. Since its inception there has been compiled, systematically and thoroughly, the most complete collection of proprietary medicine advertising "literature" to be found anywhere. Such a collection is of inestimable value in tracing, through the devious paths of ever-varying claims for composition and therapeutic virtues, the evolution of many proprietary products now on the market. To see the advertisements put out by different firms a few years ago, and then to compare them with advertisements for the same products to-day, is in itself a revelation of the steady change—for the better—that has taken place in the commercial standards of pharmaceutical manufacturers.

The work that the laboratory has done in exposing, through the pages of THE JOURNAL, the frauds connected with the exploitation of some of the "ethical" proprietaries, is well known. The Council has felt that the medical profession, having vigorously attacked the "ethical" proprietary evil and, to a large degree at least, set its own house in order, could no longer be accused of inconsistency in exposing the broader and more widely-spread frauds of the "patent medicine" traffic. Within the past year, therefore, the laboratory has extended its work to include the examination of some of the more vicious "patent medicines."

In connection with this work there is being made an ever-increasing collection of information on practically every pharmaceutical or medical humbug that has come before the public in recent years. Inquiries for information about medical frauds and fakes are being received daily. A few of these are answered through THE JOURNAL, but the limitations of space make it necessary to answer the great majority by correspondence. As a correlated branch of the laboratory's work, a "testimonial file" has been compiled which contains the names of several thousand physicians who have written testimonials for various proprietary preparations—some for a score or more.

The Association laboratory is a unique institution, and it is doubtful if even yet the medical profession fully appreciates its value. Not that its equipment and organization differ essentially from those of any first-class chemical laboratory; but in the scope of its work and in the absolute independence of its action it has no counterpart. Municipal and state laboratories invariably find their work hampered and their usefulness curtailed by the political considerations which the antagonizing of powerful interests develops; even federal examining bodies are not free from such restrictions. In the Association laboratory such considerations have had no place and it has published work that others would not have dared to publish. For the first time in the history of medicine—not alone in the United States but anywhere—physicians have an impartial, non-commercial scientific body to determine the honesty of the medicinal preparations put up for their use.

What the chemical laboratory has accomplished can not easily be separated from what the Council on Pharmacy and Chemistry has done, for the work and aims of these two institutions have been largely along the same lines. Some things, however, can be credited specifically to the laboratory's account:

It has for instance shown up the worthlessness of many of the widely advertised "ethical" proprietaries and has torn the veil of mystery from some of the most vicious "patent medicines" on the market.

It has made ridiculous in the eyes of the profession the impossible and absurd formulas with which the advertising pages of medical journals—THE JOURNAL among them—used to abound.

It has proved that many combinations of drugs offered to the profession are pharmaceutical impossibilities and scientifically absurd.

It has challenged successfully the attitude previously taken by pharmaceutical manufacturers that no one had a right to publish anything derogatory to their proprietary products.

It has, in short, revolutionized the point of view. While the medical profession used to be looked on as fair game for the fraudulent exploiter of worthless or vicious nostrums it is now viewed with a fear tempered by wholesome respect for its increased worldly wisdom on the question of proprietaries.

CANCER IN FISHES

On April 9, the President sent a message to Congress in which he requested that an appropriation of $50,000 be made to provide for the active investigation of problems connected with cancer in fishes. No doubt this request may seem to be a rather strange one at first sight. Why cancer in fishes and not cancer in human beings? Perhaps the President answers this question in his message when he says: "Progress in the prevention and treatment of human diseases has been marvelously aided by the investigation of the same disease in those of the lower animals that are subject to it, and we have every reason to believe that a close investigation into the subject of cancer in fishes which are frequently swept away by an epidemic of it may give us light on this dreadful human scourge."

A great deal has been learned about cancer in fishes during recent years. In addition to being subject to cancer in various organs, occurring in more or less isolated instances, fishes are especially liable to cancer of the thyroid gland. The peculiar feature of the latter form, which affects especially the trout family, is that it not infrequently becomes epidemic in hatcheries and thus constitutes a serious obstacle to artificial propagation.

Numerous and important problems are raised by the frequency of this cancerous process in the thyroid in fishes. Investigations are needed to determine its relationship to the external conditions and to heredity. It has already been found that in a hatchery, previously free from the disease, the introduction of ova from elsewhere may be followed by the appearance of the peculiar tumors in many of the fish raised from the imported ova; and, further, that fish of the indigenous stock kept with the affected also frequently develop the disease. Consequently it seems as if the disease is hereditary as well as contagious.

Possibly the trout may prove a more favorable animal than any other now at our disposal for the experimental study of cancer. In this country fish cancer has been studied by Gaylord of the New York State Cancer Laboratory at Buffalo, who has found epidemic thyroid cancer in several hatcheries in New York. He has pointed out what may be a remarkable circumstance, namely that the area in the United States of the greatest concentration of human cancer is almost identical with the area over which the trout family is distributed. It is chiefly as the result of this work and certain considerations arising out of it that the matter now has come before the national government. We hope that Congress will follow the enlightened policy illustrated by the foundation and maintenance of a cancer laboratory by the legislature of the state of New York—the first laboratory in this country devoted exclusively to the study of cancer—the activities of which should be furthered and enlarged now that such important problems are pressing for solution.

THE SCOPE OF THE PHARMACOPEIA

Now that the rather spirited discussion as to the scope of the Pharmacopoeia is being carried into the columns of the daily press it may be well to stop and consider what the Pharmacopeia is, to whom it belongs and what are the interests of the owners in the question of its scope. The United States Pharmacopeia is the property of the United States Pharmacopeial Convention; the latter is made up of delegates from medical and pharmaceutical colleges and societies and from the three government medical services. The book belongs to this Convention alone; neither the commercial interests nor the officials engaged in the enforcement of the federal and state food and drug laws have as yet any rights in the work. The mere fact that Congress when it passed the Food and Drugs Act adopted the standards of the United States Pharmacopeia and National Formulary for the preparations contained therein does not give the government any rights in the work beyond what the Pharmacopeial Convention sees fit to give it. The United States Government has never appropriated a cent to defray the cost of the preparation of the work and recently when a bill was introduced into Congress which practically provided that the United States assume the burden of revising the Pharmacopeia there was an almost universal protest and none was more emphatic in the condemnation of the whole proposition of government control than some of those now so vigorously protesting against any effort to restrict the usefulness of the Pharmacopeia as a government standard.

Hence, there is no need for those who now control the United States Pharmacopeia to consider the question of establishing standards for drugs in which they are not interested. The interests of the medical and pharmaceutical professions in this matter are largely the same. It is argued that it is to the interest of the public health for all drugs, by whomsoever used, and whether of value or not, to have standards fixed. Admitting the desirability of having standards for these drugs in which physicians are not interested, it plainly devolves on the people themselves (through Congress) to establish such standards. The abilities of the owners of the present Pharmacopeia are already taxed to the utmost to prepare the work on the present lines; the last revision required five years and when it did appear it was far from representing the present-day needs of the physician. Even in the last revision a great deal of time was spent in formulating standards for preparations (whisky for example) in which the modern physician is not greatly interested.

If we are to have a pharmacopeia which is to be a standard, meeting fully the needs of the pure drug and custom-house officials, etc., the only logical thing is to ask Congress to prepare such a work; it is only fair that the government should bear this as well as the other expense connected with the enforcement of customs

laws, the Food and Drugs Act, etc. Such an arrangement would have the additional advantage of freedom from possible corruption.

Aside from the injustice of imposing a greatly increased burden on the owners of the present Pharmacopeia, it is contrary to the interests of the public health to have drugs of no known value included in the Pharmacopeia. In spite of all disclaimers to the contrary, pharmacopeial recognition at present is mistaken for endorsement. Some of the most notorious nostrums on the market advertise freely the fact that the ingredients are recognized by the United States Pharmacopeia. We have also the testimony of Dr. Kebler,* chief of the Division of Drugs of the Bureau of Chemistry of the Department of Agriculture, who states: "When we remember that there are promoters of medicines who take advantage of every possible situation that presents itself we should be very circumspect about giving any questionable drug standing." And speaking of phytolacca he says that the makers of "patent" medicines make the reply: "That is recognized in the Pharmacopeia. It is approved by the medical and the pharmaceutical professions."

Those who followed the early prosecutions against the users of wood alcohol in medicinal products will remember the impression made on both jury and judge by the fact that wood alcohol was (through the efforts of a few misinformed physicians and pharmacists, and against the protests of some of the best men in both professions) included for a brief period of three years, in the sixties, in the British Pharmacopeia.

The question of what the next Pharmacopeia is to be, however, rests entirely with its owners, the Pharmacopeial Convention which meets May 10; the physicians who will there represent the medical profession should not allow their attention to be distracted from their duty, which is to consider the interests of the medical profession and the question of public health in its broadest aspect. They are under no obligations to consider the interests of the manufacturers or of the officials engaged in the enforcement of laws if these conflict with the best interests of the profession or the welfare of the public.

DRAKE UNIVERSITY AND MEDICAL EDUCATION

The commendable spirit recently shown[1] by the faculty of Drake University College of Medicine, in voting to close the college rather than to conduct it except as a first-class institution, is an example of the action which representative members of the medical profession are willing to take in order that fair standards of medical education may prevail. This spirit has already been shown in other cities where colleges have been voluntarily closed for similar reasons, or where mergers have been brought about between two or more colleges in order that stronger and better equipped medical schools could be formed. This willingness to forego personal gain in the interest of better trained physicians is a sure indication that the problems of medical education in this country will be satisfactorily solved. But an unexpected turn of events followed the action of the Drake University faculty which may permit the continuance of the medical school. An agitation begun by the medical students may result in the raising of sufficient funds to insure the continuance of the college. It is hoped that this agitation in Des Moines will awaken the people to the fact that they not only have a decided interest in medical education, but also that it is their chief concern that this education be thorough and practical. It would be interesting if this movement led to the development in Des Moines of the same conditions that exist in Cincinnati, where the city is supporting a medical school in connection with its enormous city hospital, thereby insuring not only the best possible care for its sick poor but also that the abundance of clinical material in the latter will be used to the greatest advantage in the training of future physicians.

CLUB PRACTICE RESULTS IN ANTAGONISM TO PHYSICIANS

A striking illustration of the results of club practice appears in a letter from a physician of Budapest published in a recent number of the *Wiener klinische Rundschau*. The letter states that a laboring man recently shot a club physician because the latter, the year before, had reported adversely on his application for sick indemnity. As a result of this and many less serious attacks, the physicians of the *Krankenkassen* sick-clubs have asked the authorities to adopt regulations to protect them against unjustified insults and ill-treatment on the part of members of the clubs. The *Krankenkassen* impose a fine on members guilty of such conduct, but evidently this provision is not enforced or it is not sufficiently stringent to deter members from abusing physicians. The letter adds that although this attack was evidently committed by a man not mentally sound, yet it has a certain significance as showing the feeling on the part of members toward the physicians of the sick-clubs. Part of this may be attributed to the failure on the part of physicians to understand the views of the great mass of working people and to show proper consideration for their patients, but the writer states that the campaign of abuse which has been inaugurated against the reasonable demands of the club physicians has increased the ill feeling of the members toward the physicians. The club physicians seem to be utterly defenseless. The daily press in some cases criticized their meek demands as directly inimical to the laboring classes. These unfortunate conditions have been made possible only through the lack of united action on the part of the Hungarian physicians. And yet it is interesting to note that the writer of the letter referred to states that things are not yet quite bad enough to rouse them to concerted action, and to bring them all into one organization.

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* THE JOURNAL A. M. A., Feb. 5, 1910, p. 439.

1. See Iowa state news in this issue.

Medical News

ARKANSAS

State Society Meeting.—The annual meeting of the Arkansas Medical Society will be held at Little Rock, May 3-6. Dr. James H. Lenow, Little Rock, is president, and Dr. Morgan Smith, Little Rock, is secretary.

County Societies Elect Officers.—At the annual meeting of the Independence County Medical Society, held at Batesville, April 4, the following officers were elected: President, Dr. O. J. T. Johnston, Floral; vice-president, Dr. T. N. Rodman, Cushman; secretary-treasurer, Dr. Frank A. Gray, Batesville; delegate, Dr. O. J. T. Johnson, Floral.——At the annual meeting of the Garland County Medical Society, held at Hot Springs, April 5, the following officers were elected: President, Dr. Jacob W. McClendon; vice-president, Dr. John F. Rowland; secretary, Dr. John S. Wood; treasurer, Dr. Joseph S. Horner; censor, Dr. S. L. Steers; delegates, Drs. Linda H. Barry and Eugene C. Hay; alternates, Drs. William O. Forbes and Morgan F. Mount, all of Hot Springs.

CALIFORNIA

Awarded Damages. In the case of Robert Agers against Dr. Edwin Z. Hennesy, Napa, the jury awarded the plaintiff $10,000 damages, April 2, for alleged bad setting of a broken leg.

County Society Elects Officers.—The San Luis Obispo County Medical Society met in San Luis Obispo, March 31, and elected the following officers: President, Dr. H. M. Cox, San Luis Obispo; vice-presidents, Drs. Harry S. Walters, Arroyo Grande; Charles J. McGovern, San Luis Obispo; and William R. Hedgpeth, Paso Robles, and Dr. Richard M. Bradbury, San Luis Obispo, secretary-treasurer.

Hospital News.—Articles of incorporation of the Southern California Sanitarium and Farm Company were filed in San Diego March 19, with a capital stock of $500,000. The corporation will engage in general hospital business.——The temporary receiving hospital, San Diego, has been completed and affords ample facilities for the furnishing of first aid.——Ramona Hospital, San Bernardino, has been completed and is open to receive patients. The building is of the mission type, three stories in height and thoroughly equipped. Dr. Henry W. Mills is in charge of the institution.——The Board of Supervisors of Alameda county passed a resolution, March 13, to secure twenty acres in the city of Oakland as a site for the new county infirmary, which is to cost about $500,000.——The new receiving hospital, Los Angeles, was opened March 6. The institution has a large receiving room, operating room, male and female wards, and *x*-ray room, and has accommodation for ten patients.

CONNECTICUT

Vital Statistics.—During 1909 the health of the state has compared favorably with that of previous years. The death-rate for the year was 15.6 per 1,000; in 1908 it was 15.4, and in 1907, 17.1. The total deaths numbered 16,460, or 460 more than for the previous year. There were 1,164 more births recorded in 1909 than in 1908, or a rate of 25.7 per 1,000, as compared with 24.2. Tuberculosis caused 1,422 deaths, or 1.34 per 1,000 of population. The greatest improvement noted is in deaths from typhoid fever, which numbered 154, or 0.14 per 1,000 of population, as compared with 0.18, 0.20 and 0.22, respectively, during the three previous years.

Campaign Against Flies.—The State Board of Health has issued a warning against the danger of food contamination and transmission of disease by flies. The following rules are laid down:

Do not allow decaying material of any sort to accumulate on or near your premises.

All refuse which tends in any way to fermentation, such as bedding, straw, paper, waste and vegetable matter, should be disposed of or covered with lime. Keep all receptacles for garbage carefully covered and the cans cleaned or sprinkled with lime.

Keep all stable manure in vault or pit, screened or sprinkled with lime.

See that your sewerage system is in good order; that it does not leak, is up-to-date and not exposed to flies. Pour kerosene into the drains. Burn or bury all table refuse.

Screen all food, whether in the house or exposed for sale.

Keep the flies away from the sick, especially those ill with contagious diseases. Kill every fly that strays into the sick room. His body is covered with disease germs.

While it may be impossible to exterminate all flies, yet the danger and trouble may be greatly lessened by a proper use of screens for doors and windows.

Society Meetings.—The one hundred and eighteenth annual meeting of the Hartford County Medical Association was held in Hartford, April 5, and the following officers were elected: President, Dr. Herman W. Strosser, New Britain; vice-president, Dr. Harmon G. Howe, Hartford; secretary-treasurer, Dr. Frederick B. Willard, Hartford; councilor, Dr. Oliver C. Smith, Hartford; censors, Drs. Edward G. Fox, Wethersfield, Edward R. Lampson, Hartford, and H. A. Deane, South Windsor; and delegates to the state society, Drs. Frederick B. Willard, Michael H. Gill and John H. Rose, Hartford, Erastus P. Swazey, New Britain, Charles M. Wooster, Tariffville; Myron P. Robinson, Windsor Locke, and Thomas Q. Sloan, South Manchester.——The one hundred and eighteenth annual meeting of the New London County Medical Association was held in New London, April 7. The following officers were elected: President, Dr. P. J. Cassidy, Norwich; vice-president, Dr. E. C. Chipman, New London; secretary-treasurer, Dr. E. O. Winship, New London; delegate, Dr. L. F. LaPierre, Norwich; censor, Dr. R. W. Kimball; county reporter, Dr. E. J. Brophy, Norwich.

FLORIDA

Bacteriologic Laboratory to Be Established.—It has been announced that the State Board of Health has decided to establish a complete bacteriologic laboratory in Pensacola at an early date. This is to be done on the recommendation of Dr. Warren E. Anderson, Pensacola.

Personal.—Dr. Ralph N. Greene, Tallahassee, has been elected chief physician at the Florida Hospital for the Insane, Chattahoochee, succeeding Dr. James H. Randolph, resigned; Dr. Benjamin F. Barnes, River Junction, has been elected assistant physician at hospital to succeed Dr. Greene.

State Medical Society Elects.—At the thirty-seventh annual meeting of the Florida Medical Association, held in Jacksonville, April 6-8, the following officers were elected: President, Dr. James D. Love, Jacksonville; vice-presidents, Drs. Albert H. Freeman, Starke; Leon A. Peek, Melbourne; and Fred C. Moore, Tallahassee; secretary-treasurer, Dr. J. D. Fernandez, Jacksonville (reelected); councilors, Drs. Leonidas M. Anderson, Lake City; J. Harris Pierpont, Pensacola, and Henry E. Palmer, Tallahassee, and librarian, Dr. Charles E. Terry, Jacksonville (reelected). Tallahassee was chosen as the place for the next annual meeting.

ILLINOIS

Milk Commission Named.—At a meeting of the Sangamon County Medical Society, April 11, a milk commission composed of the following Springfield physicians was appointed: Drs. Hugh T. Morrison, Samuel E. Munson, Harry C. Blankmeyer, Emil L. Bernard and George T. Palmer. This commission will go into all the facts concerning the establishment of a system of certified milk for Springfield.

Society Meetings.—Tazewell County Medical Association met in Pekin, April 12, and elected the following officers: President, Dr. Harry V. Bailey, Pekin; vice-president, Dr. Harley A. Zinzer, Washington; secretary, Dr. Fernando C. Gale, Pekin; delegate to the state society, Dr. Henry L. Yoder, Morton, and alternate, Dr. Eugene F. Kelchner, Delavan.——At the regular meeting of the Rock Island County Medical Society, held in New Harper, April 12, the following officers were elected: President, Dr. Henry S. Bennett, Moline; vice-presidents, Drs. Warner L. Eddy, Milan, and Joseph E. Asay, Rock Island; secretary, Dr. Albert N. Mueller, Rock Island; and treasurer, Dr. Arthur T. Leipold, Moline.

Personal.—Dr. and Mrs. John A. Koch, Quincy, sail April 23 for a six-months' trip abroad.——Dr. Daniel D. Brengle, Winchester, one of the oldest physicians in the state, is critically ill.——Dr. John M. Gulick, Manteno, was operated on at Mercy Hospital, Chicago, for appendicitis, recently.——Dr. Edward A. Foley, Kankakee, has been appointed assistant superintendent of the Anna State Hospital.——Dr. Charles E. Crawford, city health officer of Rockford, has returned from a trip to California and other western points.——Drs. Walter S. Haines and Walter H. Allport, Chicago, have been appointed members of the State Commission on Occupational Diseases, succeeding Drs. Alice Hamilton and Arnold C. Klebs, Chicago, resigned.

INDIANA

Physician Wins Suit.—In the case of Mrs. William H. Miers against Dr. George S. Crawford, Milford, for alleged malpractice, a jury in Shelby circuit court, on April 14, returned a verdict in favor of Dr. Crawford.

Personal.—Dr. Samuel Hollis, Hartford City, has been elected secretary of the county board of health, vice Dr. William N. Cronin, Hartford City, deceased.——Dr. Burton D. Myers, Bloomington, started for Europe, March 19.

State Board Ruling.—The State Board of Health has made a ruling that the pure food laws must be conformed to in the strictest sense of the letter. The order specifies that beginning with July 1, bread shall be protected by suitable wrapping paper or be placed in bags before being taken from bakeshops, and that all other goods from bakeries shall be carried in tight, dustproof boxes or cartons. The order that applies to butchers and wholesale meat dealers will go into effect on May 15, and is as stringent as the one governing bakeries.

February Mortality and Morbidity.—During the month there were 2,856 deaths, or 99 fewer than for the corresponding month of last year, a rate of 13.4, the rate of February last year being 14. There were 394 deaths of infants under 1 year of age, or 13.7 per cent. of the total; 163 deaths of children from 1 to 5, and 953 of individuals 65 and over, or 33.3 per cent. of the total. Influenza was the most prevalent disease, pneumonia was fifth in area of prevalence, and in February of last year it was third. Following is the order of disease prevalence: Influenza, tonsillitis, measles, bronchitis, pneumonia, rheumatism, scarlet fever, pleuritis, diphtheria and membranous croup, chickenpox, whooping-cough, typhoid, diarrhea, smallpox, intermittent and remittent fever, erysipelas, cerebrospinal meningitis, inflammation of the bowels, cholera morbus, puerperal fever, dysentery, typhomalaria fever, and cholera infantum.

IOWA

Medical Society Reorganized.—The old Keokuk Medical Society, which has been in existence for sixty years, was reorganized March 21, and Dr. Joseph A. Scroggs, Keokuk, was elected president.

Unlicensed Practitioner Fined.—Dr. Renshaw, Logan, arrested and indicted for practicing medicine in Harrison county without a license, pleaded guilty, March 30, and was fined $300.

Drake University College of Medicine Not to Close.—At a recent meeting the faculty of Drake University College of Medicine voted to discontinue the college after the close of the present session owing to the fact that sufficient money was not available to make needed improvements in the laboratories and to provide for the growing expenses for maintenance. On learning of the faculty's action a demonstration begun by the medical students has so aroused the citizens of Des Moines that ample funds may be subscribed to insure the continuance of the college. The improvements which are now practically assured are a new laboratory building on the university campus, a larger use of the hospital wards of the city, and the raising of $100,000 for maintenance, of which sum $40,000 has already been subscribed.

Personal.—Dr. Murdoch Bannister, Ottumwa, has been appointed by the governor as a member of the Board of Control of State Institutions.——Dr. Charles E. Boyd, Newton, has returned from abroad.——Dr. James M. Donelan has been reappointed health officer for Glenwood and Glenwood township.——Dr. Warrick W. Klein, Waterloo, sustained severe injury to both legs, necessitating their amputation above the ankles, by falling from a moving train while rounding a sharp curve, March 17.——Dr. Henry H. Nichols, Marshalltown, is a patient in St. Thomas Hospital, having submitted to an emergency operation for an abscess of the chest.——Dr. Harry R. Reynolds, Clinton, has been appointed a member of the board of pension examiners for the district, vice Dr. Christian Jonsson, deceased.——Dr. Carl C. Lytle, Lansing, underwent an operation for appendicitis at Mercy Hospital, Dubuque, April 4.——Dr. Edgar H. Jones has been appointed city physician and city health officer of Eldora.

LOUISIANA

Personal.—Drs. J. Hope Lamb and Henry A. Veazie, New Orleans, have been reappointed inspectors of all vessels coming from fruit ports in Central America and foreign places.——Dr. Whyte Glendower Owen, Whitecastle, has been appointed by President Taft as one of the three surgeons from Louisiana to a place on the inactive list of the Medical Reserve Corps, United States Army, with the rank of first lieutenant.——Dr. Oscar Dowling, Shreveport, has removed to New Orleans to take up the work of the late Dr. Gordon King.

County Societies Elect Officers.—The Grant Parish Medical Society met at Colfax, March 30, and elected the following officers: President, Dr. Philip Goode, Colfax; vice-president, Dr. W. A. Fletcher, New Verda; secretary, Dr. J. Luther Kelley; and treasurer, Dr. E. B. Gray, Colfax.——The Winn Parish Medical Society met at Winnfield, April 6, and elected the following officers: President, Dr. Carson R. Reed, Grace; vice-president, Dr. J. B. Parker, Sikes, and secretary-treasurer, Dr. S. Clyde Fittz, Winnfield.——At the annual meeting of the East Feliciana Parish Medical Society in Jackson, April 6, the following officers were elected: President, Dr. Jesse W. Lea, Jackson; vice-president, Dr. William F. Hagaman, Norwood; and secretary-treasurer, Dr. Robert P. Jones, Clinton.

MARYLAND

Coming Meeting.—The one hundred and twelfth annual meeting of the Medical and Chirurgical Faculty of Maryland will be held in Baltimore, April 26, 27 and 28, under the presidency of Dr. G. Milton Linthicum, Baltimore. The secretary is Dr. John Ruhräh, Baltimore.

Appropriations for Hospitals.—Annapolis has received an appropriation of $30,000 for the completion of the Emergency Hospital building, in addition to the usual appropriation of $5,000 a year for maintenance.——Johns Hopkins University has received the appropriation of $25,000, asked for by it, and Mercy Hospital, Maryland General Hospital, and the University of Maryland Hospital, Baltimore, have received an appropriation of $13,000 each per year.

Hospital and Dispensary News.—Extensive improvements will be made at the Springfield Asylum for the Insane, $270,000 having been appropriated by the state for the purpose.——An electric plant will be installed at Bayview Hospital, which will also provide for Sydenham Hospital for Infectious Diseases.——The dispensary of St. Agnes' Hopital, which has been closed for sixteen years, was reopened April 5, the medical staff of the hospital being in charge.

Bills Vetoed and Approved.—The governor has vetoed the "optometry" bill, much to the gratification of the medical profession. This bill aimed to create a special class of "optometrists," with examining board, license, etc. He also vetoed bills for incorporating the State University of Maryland; for requiring full Pasteur treatment for persons bitten by rabid animals, and for authorizing the sale of condensed skimmed milk. He approved the bills for the reorganization of the State Board of Health into five departments, but reducing the annual appropriation for expenses to $10,000; the midwifery bill; for a woman physician for the Baltimore juvenile court; for a bond issue of $100,000 for the State Tuberculosis Sanatorium at Sabillasville, for buildings, and $75,000 a year for maintenance; and requiring that tuberculin shall bear a label.

Baltimore

Johns Hopkins University Raising Fund.—The Johns Hopkins University is endeavoring to raise $2,000,000, to enable it to move to the new suburban site, Homewood, and to branch out in various directions. A department of preventive medicine is one of the new features proposed.

Personal.—Dr. Robert W. Johnson has been elected vice-president of the Churchmen's Club.——Dr. Lewis M. Allen was elected president of the Maryland Alumni Association of the University of Virginia, April 9.——Dr. William A. Fisher has resigned the office of assistant surgeon of the Fifth Regiment, Maryland National Guard.

MINNESOTA

Personal.—The University of Minnesota has appointed Dr. Thomas G. Lee, Minneapolis, director of the Institute of Anatomy, as its delegate to the second International Anatomic Congress, Brussels, and to the eighth International Zoologic Congress, Graz, Austria. Dr. Lee sailed for Europe April 9, and will spend the summer in visiting laboratories in the interest of the new institute, which is to cost $200,000.——Drs. A. E. Ahrens and S. G. Cobb, St. Paul, have gone to Vienna for five months' postgraduate work.

NEW HAMPSHIRE

State Medical Society Meeting.—The one hundred and nineteenth annual meeting of the New Hampshire Medical Society will be held in Concord, May 12 and 13. Dr. Frank Blaisdell is president and Dr. D. E. Sullivan, secretary.

National Department of Health Approved.—At a meeting of the Center District Medical Society, held at the State Hospital, Concord, April 11, resolutions were unanimously adopted favoring Senate Bill 6049 for the establishment of a national department of health, and urging that the Committee on Legislation of the American Medical Association and the representatives of New Hampshire in Congress support the bill.

County Society Elects Officers.—The fifth annual meeting of the Hillsboro County Medical Society was held in Manchester, April 6, when the following officers were elected: President, Dr. John H. Gleason, Manchester; vice-president, Dr. Herbert L. Smith, Nashua; secretary-treasurer, Dr. Ella B. Atherton, Nashua; executive committee, Drs. Frank Blais-

dell, Goffstown; Arthur F. Sumner, Manchester; William E. Reed, Nashua; Joseph W. Finerty, Milford, and Guy H. Greeley, Merrimack; delegates to the state medical society, Drs. George S. Foster, Manchester; Frank E. Kittredge, Nashua; and Nathaniel F. Cheever, Greenfield; auditor, Dr. James B. Pettingill, Amherst.

NEW YORK

Scarlet Fever Epidemic.—An epidemic of scarlet fever has appeared along the Putnam division of the New York Central Railroad starting at Amawalk; from there it spread to Yorktown Heights, to Kitchawan, Millwood, Briercliff Manor and Ardsley.

Cases of Communicable Diseases Reported During February.—There were reported during February 3,203 cases of tuberculosis; 2,025 cases of diphtheria and croup; 4,118 of scarlet fever; 10,047 cases of measles; 566 cases of typhoid; 32 cases of cerebrospinal meningitis; 46 cases of smallpox, and 4 cases of ophthalmia neonatorum.

Mortality from Pulmonary Tuberculosis.—The mortalities of the state from this disease for quinquennial periods since 1885 have been as follows: 1885-1889, yearly average 11,913, percentage of all deaths, 12.6; 1890-1894, 13,339 yearly average, 11.0 percentage of all deaths; 1895-1899, 13,313 yearly average, 10.9 percentage of all deaths; 1900-1904, 13,458 yearly average, 10.4 percentage of all deaths; 1905-1909, 14,557 yearly average, 10.1 percentage of all deaths.

From Legislative Halls.—The assembly has passed a bill prohibiting the sale of cocain and other drugs without proper restrictions.——The senate has also passed Senator McManus' bill empowering the New York City Health Department to establish dental stations to care for the teeth of children under 14 years of age who cannot afford to pay for such treatment.——The assembly has passed the bill which would give to the Board of Estimate and Apportionment in New York City the right by resolution to determine that there shall be in the City of New York a board of inebriety. When the board determines this it will be incumbent on the mayor to appoint such a board which shall consist of seven members, two of whom shall be physicians. The board is given authority to purchase a site for a hospital and industrial colony for the care and treatment of inebriates within or without the City of New York. After the Board of Inebriety is appointed any male person who is a resident of New York City and who is adjudged by a court of record to be an inebriate may on his own application or the petition of a relative or a commissioner of public charities or of the Board of Trustees of Bellevue and the Allied Hospitals and on the certificate of two medical examiners in lunacy be committed by such court to the board for a period of not less than one year nor more than three years. The provisions of law relating to the commitment of insane persons shall so far as may be practicable apply to the commitment of inebriates.——A bill has been introduced amending the health law by relaxing the present restrictions against the admission of unvaccinated pupils to the public schools by requiring such admission on a duly executed certificate of a physician that the pupil's health would be jeopardized by vaccination, or on a written declaration of the parent or guardian of the pupil to the effect that he is conscientiously opposed to vaccination.——Among the bills reported on favorably was that one giving State Health Commissioner Eugene H. Porter increased jurisdiction over the discharge of sewage and industrial wastes into public waters.——Governor Hughes has signed the Merritt bill appropriating $1,231,500 for state hospital maintenance.

New York City

Another Building for Physicians.—A new office building for physicians and dentists exclusively is being erected at No. 40 East Forty-first street. Among the attractions offered are a sterilizing plant, a laundry, a buffet-restaurant and a sun-room.

Junior Sea Breeze to Reopen.—This station has been in operation for four years and has been sustained entirely by Mr. Rockefeller. Two physicians, twenty-two nurses, and two dieticians will be in attendance at the camp and four nurses will devote their time to the education of the mothers in the tenement homes.

Personal.—Prof. F. Lange of Munich, recently arrived here as a representative of Germany to the orthopedic congress to be held at Washington.——Dr. William Hallock Park, professor of bacteriology and hygiene in the University of New York, will receive the honorary degree of LL.D. from Queen's University of Kingston, Ont., this month.

Pathologic Laboratory for Hospital.—Adolph Lewisohn has given $130,000 more to Mount Sinai Hospital for the purpose of building and equipping a pathologic laboratory. The new laboratory will be known as the Mount Sinai Pathologic Laboratory, Adolph Lewisohn Foundation. The site for the new building has been purchased on One Hundredth street near the hospital proper. Mr. Lewisohn some time ago made a gift of $70,000 to the hospital.

Reception and Dinner to Dr. Jacobi.—The Medical Society of the State of New York will give a reception on the evening of May 6, at the New York Academy of Medicine, New York City, in honor of the eightieth birthday anniversary of Dr. Abraham Jacobi.——Invitations have been issued by the board of directors of the Hospital for Deformities and Joint Diseases for a dinner in honor of Dr. Abraham Jacobi, the senior consultant of the hospital, to be given at the Waldorf on April 20.

PENNSYLVANIA

Nurses Receive State Licenses.—Three hundred and thirty-nine nurses have just received from the Pennsylvania State Board of Examiners for the Registration of Nurses, notification that they have passed the necessary examinations and have been registered to practice in this state. The next meeting of the board for the examination of nurses who desire registration will be held in Pittsburg, April 21. The board proposes to hold meetings in various sections of the state, so that it may learn the needs of the various localities and get in touch with the physicians and nurses, in an effort to see that the nurse registration act passed by the legislature is being properly observed.

Tuberculosis Society Names New Officers.—Complete reorganization of the Pennsylvania Society for the Prevention of Tuberculosis, took place at the nineteenth annual meeting held April 13. Dr. James Tyson, who recently retired from the chair of medicine at the University of Pennsylvania, was unanimously elected to the presidency, Dr. Charles J. Hatfield, the incumbent, retiring. The other officers elected are: Vice-presidents, Drs. W. D. Robinson, Philadelphia, William Charles White, Pittsburg, and Charles H. Miner, Wilkes-Barre; treasurer, George Burnham, Jr.; secretary, Dr. Ward Brinton, Philadelphia; solicitor, Samuel Scoville, Jr.; directors, Drs. Joseph Walsh, Charles J. Hatfield, C. Lincoln Furbush, A. P. Francine, F. A. Craig, J. Clinton Foltz, J. Willoughby Irwin, all of Philadelphia; Messrs. Alexander Wilson, Asa S. Wing, L. I. Palmer, Henry H. Collins, Jr., Alfred C. Scattergood, Mrs. William T. Jenks, Mrs. Lawrence Lewis and Miss Henrietta Ely.

State Examination of School Children.—State Health Commissioner Dixon has completed the medical inspection of the rural district schools in Dauphin, Cumberland and Lancaster counties. This work will form a basis of examination of school children in the rural districts throughout the entire state. Children examined in 572 schools numbered 12,255. Of the total number 2,439 children presented one or more physical defects tending to handicap them in their school work; 1,929 children showed defective vision, 249 defective hearing, 284 defective nasal breathing, and 55 presented conditions that would lead the inspector to suspect the existence of tuberculosis. Eleven inspectors in Dauphin, 9 in Cumberland and 35 in Lancaster made the examinations in these three counties, from one to three townships being assigned to each physician. The inspectors also made a thorough investigation of the sanitary conditions existing at the schools. On receiving the reports at the central bureau at Harrisburg, the chief medical inspector and his assistants go over them carefully, and letters are written to the parents of the children in whom physical defects are found, calling attention to these defects and suggesting that the child be taken to the family physician for more detailed examination and treatment.

Philadelphia

Von Eiselsberg Conducts Clinic.—Dr. Anton von Eiselsberg, professor of surgery in the University of Vienna, conducted a surgical clinic in the Jefferson Medical College Hospital, April 13.

Banquet to Dr. Cohen.—Dr. Jacob Solis Cohen was the guest of honor at the tenth annual banquet of the Northern Medical Association, the occasion being the fiftieth anniversary of Dr. Cohen's graduation from the University of Pennsylvania, Department of Medicine.

Cocain Sellers Fined.—George and Charles Rollins pleaded guilty before Judge Carr, April 7, to the indictment charging them with unlawfully selling cocain and having the drug in their possession, and were sentenced to pay a fine of $500 each and to serve two years in prison.

Food Commissioner Plans Arrests.—April 15, Food Commissioner Foust ordered a renewal of the crusade against Philadelphia dealers for the sale of partly decomposed eggs, known in the trade as "rots and spots." The fine for the offense is from $200 to $1,000, with imprisonment if the court may decide that it should be added.

Resident Physicians Appointed.—The senior medical appointments of the University of Pennsylvania were announced April 4. The men who have been assigned to the University Hospital are: I. G. Clark, R. M. Lewis, L. H. Langdon, F. S. Sproul, I. W. Cook and P. McCall Keating. The successful men were selected from the list of twenty who had obtained the highest scolastic average on February 1.

Personal.—Dr. and Mrs. James A. Irwin sailed for Italy April 19.——Dr. Joseph Leidy, who has been spending the winter with his family in Switzerland, returned to his home April 15.——Dr. Charles H. Frazier, who was recently operated on at the University Hospital for appendicitis, is rapidly recovering.——Dr. H. R. Owen, a police surgeon, has been appointed a member of the staff of surgeons at the Philadelphia General Hospital, to succeed Dr. J. Chalmers DaCosta, resigned. ——Dr. J. M. Fisher has been appointed associate professor of gynecology at the Jefferson Medical College.

Report of the Bureau of Health for February.—The report of the division of medical inspection shows 2,421 inspections, excluding schools, 5,130 total visits to schools were made; 722 children excluded from school and 84 cases held for special diagnosis; 743 fumigations ordered, 137 cultures taken, 301 injections of antitoxin and 279 vaccinations.——The report of the division of vital statistics shows 2,435 deaths reported and 2,611 births.——The report of the division of milk inspection shows that 7,677 inspections were made in which 178,959 quarts were inspected, condemning 98 quarts.——The report of the bacteriologic laboratory shows that 1,302 examinations of diphtheria, 279 of suspected typhoid blood, 843 of milk, and 199 of sputum were made, 7 disinfection tests were performed, and 8,911,200 units of antitoxin were distributed.

Charitable Bequests.—A bequest of $3,000 to the Methodist Hospital was included in the will of the late Maria Snyder. ——From an estate valued at $50,000 left by the late Mary H. Griffith the sum of $500 is bequeathed to the Bryn Mawr Hospital.——The will of the late Kate E. Hetzell bequeathed $200 to the Philadelphia Home for Incurables.——The will of the late Annie E. Travers contains the following bequests: $300 to St. Joseph's Orphan Asylum; $200 to St. Vincent's Home; $200 to St. Joseph's Orphan Asylum for Girls and $200 to St. Joseph's Working Home for Boys.——In the will of the late Caroline M. Scholkelmann, bequests of $100 each are made to the Little Sisters of the Poor of Germantown, St. Vincent's Orphan Asylum of Tacony and St. Mary's Hospital.——One thousand dollars has been received by the Aid Association of the Philadelphia County Medical Association from the estate of Mrs. Caroline E. Richmond. Mrs. Richmond left the money to be distributed among charitable institutions to Dr. Richard A. Cleeman.

Open-Air Schools Urged.—At the monthly meeting of the Board of Education held April 12, the Committee on Special Schools brought up the question of introducing open-air schools in connection with the public school system of this city. Open-air schools, designed especially for sick and weakly children, have been in operation in many European cities for about six years. In this country, the plan has been successful in New York, Boston, Pittsburg, Chicago, Hartford and Rochester. Those who now urge the adoption of the plan in Philadelphia, include C. C. Harrison, provost of the University of Pennsylvania, Dr. James Tyson, George Burnham, Rev. Joseph Krauskopf, Dr. Talcott Williams, Dr. John H. Musser, Dr. W. W. Keen, Dr. George Woodward, John Converse and Samuel F. Houston. It was also suggested that the Philadelphia Department of Health should be asked to furnish the services of a qualified school physician to examine pupils who are referred or apply for admission to such schools, that he should have general oversight of the diet and treatment of the pupils and should be required to maintain such a system of health records as will enable him to prescribe for their treatment and determine their improvement.

GENERAL NEWS AND COMMENT

Personal.—William C. Rucker, passed assistant surgeon in the United States Public Health and Marine-Hospital Service, has been made a member of the London Society of Tropical Medicine.

Coming Meeting.—The sixth annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held at the New Willard Hotel, Washington, D. C., May 2 and 3. All members are expected to make their own hotel arrangements. The president is Dr. Edward G. Janeway, New York City, and the executive secretary, Dr. Livingston Farrand, New York City. The Sociological Section, under the chairmanship of Mr. Bernard Flexner, Louisville, will take up "A Budget and Program for a Local Anti-Tuberculosis Campaign," "The Question of Enforcement," the "Enforcement of Anti-Spitting Ordinances in the United States" and "The School Child and Tuberculosis." The clinical and pathological sections will take up the medical side of the subject.

Work of the Milk and Baby Hygiene Association.—The report of the Milk and Baby Hygiene Association of Boston to March 1, 1910, is a pamphlet of about 40 pages, giving an outline of the work attempted by the association and its results. It contains numerous illustrations of its milk stations, dairies, etc., and charts and tables concerning infant mortality, its causes and distribution throughout the different months of the year. Among the babies under the care of the association during 1909 the death-rate was 33⅓ per cent. less than for the babies not under their care. Mothers are persuaded to nurse their babies and the death-rate has been found in the experience of the association to vary from 1.9 per cent. in wholly breast-fed infants to 4.68 per cent. in those partially breast-fed and up to 9.55 per cent. in those fed on carefully modified milk. Ten people's milk stations in charge of seven trained nurses are maintained; and modified, inspected and certified milk, and infants' sanitary feeding-bottles and nipples are sold at cost. Conferences have been organized with twenty-four volunteer physicians to instruct mothers in the care and nourishment of their children. There are also a class for high-school girls and lectures to fathers and other groups. Tracts on the care of children are distributed, and by the use of special phonograph cylinders and graphic exhibits the educational influence of the organization is extended. The association also takes part in the propaganda for a better city milk-supply and better methods of handling, cooperates with the public health authorities and takes part in hearings before the legislature.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 9, 1910.

Changes in Regard to Coroners' Inquests

As foreshadowed in previous letters important changes are about to be made in the antiquated law of coroners' inquests which dates from the thirteenth century. Fifteen months ago the home secretary appointed a committee to inquire into the subject and it has just issued a report. The committee reports astonishment at the good work done by coroners with out-of-date and imperfect machinery. At present the coroner has power to order a post-mortem examination only for the purpose of an inquest. The committee thinks that it is most desirable that he should have power to do so without an inquest when the cause of death is unknown and there is no reason to suspect that the death is unnatural or violent. An inquest is always a painful ordeal for friends and relatives, and by dispensing with it trouble and expense would be saved. The fees allowed to medical witnesses are regarded as inadequate. In many cases the postmortem examination can be effectively made only by a pathologic expert who can at present be paid not more than £5. Every coroner should be empowered to call such medical witnesses as may be necessary and should have a wider discretion as regards medical costs. The viewing of the body by the jury is now obligatory and to many jurymen is most disagreeable. The committee holds that the viewing is useful only in exceptional cases. As a rule it is only a perfunctory march past and quite futile. Generally, therefore, it should be dispensed with; but in special cases the coroner should have power to order it. The present law of death certification is condemned. A doctor can give a death certificate if he has seen a patient within a week of the alleged death, and it is not necessary for him to see the body and verify the fact of death. The law offers every opportunity for premature burial and every facility for the concealment of crime. The committee recommends that the physician should be required to inspect the body and that in every case in which a medical certificate is not given the death

ought to be reported to the coroner, who, however, need hold an inquest only when he thinks it necessary. The verdict in cases of suicide has always been a difficult question. As a rule no matter what the facts, juries avoid the verdict of *felo de se* in order to spare the feelings of the relatives and bring in a verdict of temporary insanity on the slenderest grounds. The committee recommends that the verdict of *felo de se* should be abolished as the members cannot imagine that the fear of it can have any deterrent effect on persons contemplating suicide. Forfeiture of the suicide's property and burial at the cross-roads have long been abolished. The only effect of retaining this verdict is to induce juries to find a verdict of temporary insanity without any evidence to justify it. The committee thinks that the verdict should simply state that the deceased died by his own hand (stating how); but that the jury should be at liberty to add that there is no evidence to show the state of his mind or that at the time of suicide he was of unsound mind.

African Entomologic Research

Active work is now in progress at the natural history department of the British Museum in connection with the African Entomological Research Committee appointed last summer by the government. Five thousand dollars has been voted for the purpose and two experienced entomologists, Mr. S. A. Neave and Mr. J. J. Simpson, have been sent to Africa, the former to Nyasaland and the latter to Nigeria. They will not only collect specimens but will interest and instruct such residents in Africa as may be willing to devote some part of their time to entomology. The object is to procure the fullest possible knowledge of the insects of tropical and subtropical Africa. The need for such an organization is rendered necessary by the immense importance of economic entomology, from the viewpoints of public health and commerce. Tropical Africa offers the best example of the development of a fertile country being hampered by the widespread occurrence of insects which convey such diseases as sleeping sickness, yellow fever, malaria, plague and several diseases of animals. The committee proposes to issue a journal which will be called the *Bulletin of Entomological Research*, and will contain the observations made by field workers which may have any bearing on the subject of economic entomology, descriptions of insect life histories, figures of their earlier stages, methods of destroying or keeping in check noxious species, papers by specialists on the classification of such groups as are known to be or likely to be injurious to man, live stock or agriculture. The requirements of medical men, farmers, etc., who have no special knowledge of entomology, will also be kept in view and fully illustrated papers will be issued from time to time showing as simply as possible the characters by which the most important pests can be recognized.

The Midwives Act

The midwives act of 1902 has now come fully into force and has revolutionized the nursing of lying-in women. Previous to that date, any woman, skilled or unskilled, could pursue the occupation of midwife without interference by the state. By the act no woman may "habitually and for gain" attend women in childbirth unless she be certified, which requires a course of training and the passing of an examination. The date at which the act was to come fully into force was postponed until the present year to give time for a sufficient number of women to be trained. A central midwives board was established for the purpose of framing rules for the issue of certificates, the conditions of admission to the roll of midwives, the course of training and the conduct of examinations. At one time it was feared that when the act came fully into force there would not be a sufficient number of midwives but this has not proved true. The number on the roll now amounts to 29,000, nearly as many as the physicians in the country. The introduction of the midwives act received considerable opposition from the medical profession who objected to the creation of an "inferior order of practitioner," the members of which were necessarily incompletely educated and trained in the practice of midwifery. But even before the passing of the act only a minority of the labors in the country were attended by physicians and many catastrophes, especially the communication of puerperal fever, arose from the ignorance of the midwives. Under the act, the midwives are subject to strict discipline, the practice of antisepsis is compulsory, and they are empowered only to attend normal labor; in case of any complication they must send for a physician. Some friction with the medical profession in the working of the act has arisen from the fact that the law while rendering this obligatory, made no provision for the payment of the physician. However, that difficulty is now being surmounted by the local poor-law authority becoming responsible for the fee.

The Perils of Altruism

At a meeting of the Haselmere Eugenics Club an address was delivered on the "Care and Control of the Feeble-Minded" by Judge Parker, who made a remarkable pronouncement on the perils of altruism from the eugenic standpoint. Referring to proposed legislation on the subject under discussion he said that for the first time in the history of the country it recognized that all proposals for social reform must be judged from considerations, not on the individuals of existing society, but on their ultimate effect on the unborn—on the inborn character of the race. The last 100 years of our history, he said, had seen a development of altruistic feelings which had led to the enlargement of the sphere in which a sense of duty to one's neighbor was the compelling force and had led the state to reform the conditions of life among the less fortunate classes. On the one hand, charitable institutions were endowed on an unprecedented scale, and on the other hand there was a vast extension of ameliorative legislation, such as the factory acts and the education acts. But those altruistic actions were primarily concerned with existing individuals. Nature had no mercy on the weakly, yet those qualities which were most valued in man were always directed toward succoring the weakly. But in succoring them were we multiplying their numbers and perpetuating the very condition against which our moral nature rebelled? The fact was that in legislation we wanted wisdom as well as enthusiasm for ideals.

The Definition of an "Accident"

An important decision on an appeal under the Workmen's Compensation Act has been given by the highest court in Great Britain—the House of Lords. A workman while in the act of tightening a nut with a spanner made an exclamation and fell back dead. Necropsy showed that death was due to rupture of an aneurism of the aorta. The aneurism was in such an advanced condition that it might have burst while the deceased was asleep and very slight exertion would have been sufficient to bring about rupture. The judge in the local court awarded the widow $1,500 damages on the ground that the death was due to accident but the employers appealed to the higher court where the award was upheld. They then further appealed to the House of Lords. In giving judgment the lord chancellor confirmed the decision of the lower courts. He said that for the workman's dependents to be entitled to compensation the injury must be caused by an accident. An accident had been defined in that court as "an unlooked-for mishap or an untoward event, which is not expected or designed." The crucial point was: Did the accident arise out of the employment? When the man's condition was such that he might have died in his sleep and the mere tightening of the nut with no more than the ordinary strain of such work caused the accident could it be said that the "accident arose out of the employment?" No importance could be attached to the fact that the strain was not above the ordinary. If this point had to be considered there must be some standard of exertion for each trade. Nor should any importance be attached to the state of the man's health. If this had to be considered there should be some standard of health varying with different ages. In each case the arbitrator ought to consider whether in substance, so far as he can judge, the accident came from the disease alone or whether the employment contributed to it. In other words, did the man die from the disease alone or from the disease and the employment together? Of the other judges Lord Macnaghten and Lord Collins concurred with the Lord Chancellor, but Lord Atkinson and Lord Shaw differed. Lord Atkinson said that on the evidence either the natural termination of the disease, rupture, was reached unaffected by the work the deceased was doing, or the work accelerated the termination. The inevitable or highly probable result of a disease could not be termed an accident. In agreeing with this view Lord Shaw said that if such occurrences were to be termed accidents a new peril would be introduced into the lives of many workers who, notwithstanding debility and chronic diseases, are anxious and willing to devote their remaining powers to earning a livelihood. As has been pointed out in previous letters to THE JOURNAL, the fear expressed by the last judge has already been realized. Employers always insure against the liabilities of the Workmens' Compensation Act. Insurance companies refuse to take at ordinary rates men suffering from defects which increase the risk of accident, though these defects often in no way prevent the workman from following his occupation. The act is therefore a cause of unemployment.

PARIS LETTER

(*From Our Regular Correspondent*)

PARIS, April 8, 1910.

Third International Congress of Physiotherapy

The opening session of the third international congress of physiotherapy, now in progress in Paris, took place March 29 under the presidency of M. Fallières, president of the republic. Professor Landouzy, dean of the college of medicine and president of the congress, made a speech in which he traced the evolution of physiotherapy. Dr. H. Vaquez then outlined the history of the two preceding congresses. Among the countries taking part are the United States, England, Germany, Italy and Belgium.

A feature of this congress is an exposition organized by Dr. A. Weil, which includes exhibits illustrative of thermal and climatic resorts, apparatus for hydrotherapy, aerotherapy, thermotherapy, electrotherapy, radiotherapy, etc., as well as foodstuffs and exhibits illustrating dietetic régimes. One section is devoted to books and reviews of physiotherapy. In a retrospective section of physiotherapy is found the apparatus used by Duchenne of Boulogne.

Projected Law on Abortion

The minister of justice has just laid before the bureau of the Chamber of Deputies a bill to modify the present law on abortion. Because of the excessive severity of the penalties, like hard labor, which the present law lays on the guilty woman as well as on her accomplices, those who are guilty are often acquitted, so that there is at present almost no check on abortion. Thus in 1908, out of 66 accused, 53 were acquitted. In order to escape this serious difficulty the new bill mitigates the penalties for abortion, replacing hard labor and a minimum of five years in a house of correction by imprisonment and fine. At the same time—and this is the new feature—the bill punishes incitement to abortion. There has been for some time an increase of the propaganda in favor of the limitation of births, based on the doctrines of Malthus. Abortion has been advocated through all channels, in speeches, lectures, pamphlets, handbills, newspaper advertisements, placards, etc., and it is hard not to see in a campaign of this kind one of the causes of the depopulation from which France is at present suffering. Against this propaganda French legislation has been up to the present almost disarmed, and it is just this serious want which the bill in question is intended to fill. It imposes a penalty of imprisonment for not more than three years and a fine of not more than 3,000 francs ($600) on the incitement to abortion (whether this incitement shall have been effective or not) by lectures in public places, by the sale or the offering for sale, even though not public, the exhibition, the posting, or the distribution in public places of writings, printed matter, advertisements, sketches, models, drugs, instruments, or any means whatsoever; by their distribution at houses; by the forwarding of such objects in packets or in unsealed envelopes by the postal service or by any agent of distribution or transportation.

Medical Inspection of Schools

The minister of public instruction has just approved a bill organizing the medical inspection of schools and making it obligatory. Up to the present, medical inspection has been organized only in a certain number of communes, especially in the large cities; in the great majority of the little communes nothing has been done.

According to the new bill there is to be medical inspection on the following points:

1. The school buildings and furniture.—The medical inspection service is to be consulted concerning the choice of sites and plans and the arrangements of new educational institutions and is to point out the imperfections in those at present existing and the improvements which should be made.

2. The régime of the schools.—The medical inspection service is to make sure of the observance of rules concerning ventilation, food, heating, lighting, cleanliness, duration of sedentary work, of rest, of sleep, of meals and of physical exercise.

3. The sanitary condition of the pupils.—The medical inspector is to make an inspection of individual pupils at least twice a year. The results of this examination, which is to bear particularly on the conditions of the respiratory organs, the cutaneous system, the organs of sight and hearing and the teeth are to be made a matter of record.

4. The observance of conditions imposed on the members of the educational staff by the hygienic regulations.

5. Special hygienic measures relative to tuberculosis and contagious diseases.

The medical inspector is also to record the amount of instruction which the pupils have received in hygiene.

The remuneration of medical inspectors has been established according to a scale differing for the urban centers and for the rural neighborhoods, where the schools are often far apart from each other. For each school the basis of remuneration is the number of pupils enrolled and not that of the pupils present the day of the visit.

The International Lannelongue Medal

Dr. Lannelongue, professor of surgical pathology at the Paris college of medicine, has just informed the Paris Surgical Society that he has founded a prize consisting of a gold medal, to be awarded every five years, and endowed by a sum of $1,000 (5,000 francs). This medal is to be international, that is, it is to be awarded to the surgeon of whatsoever country, who during the preceding ten years shall have made the most celebrated surgical discovery or performed the works which are most useful for the art and science of surgery. This medal cannot be awarded twice consecutively to the same nationality. It is to be awarded only to candidates presented by (1), the board of the Société Nationale de Chirurgie; (2) one-fourth of the other active and honorary members of the society, chosen by lot every five years; (3) the winners of the Lannelongue medal, and (4) the surgeons who are members of the faculty of ten medical colleges outside of France, two in each nationality to be chosen for the task every five years by the board of the French Société Nationale de Chirurgie. Among the nationalities from which the judges will be drawn will be the United States and Canada, as well as the South American countries. The foreign surgeons will be invited to propose a candidate; the nominations must be made before November 15 of the year preceding the annual session of the surgical society.

The New Tax on Automobiles

The Chamber of Deputies has just voted an increase of the tax on automobiles, composed of a fixed vehicle tax and a tax proportionate to the horse-power. The vehicle tax is at Paris $10 (50 francs) for a carriage with two seats and $18 (90 francs) for a carriage with more than two seats. In the provinces it varies according to the size of the population of the cities, between $4 and $8 for a carriage with two seats and between $8 and $15 for a carriage with more than two seats. Under the proportional tax a 12-horse-power car with more than two seats will pay $30 (150 francs) in Paris and a car of 100-horse-power, with more than two seats, will pay in Paris $246 (1,230 francs). Licensed physicians will always have a right to be taxed at half rate.

Death of Professor Gréhant

M. Nestor Gréhant, professor of general physiology at the Museum of Natural History and member of the Académie de Médecine, has just died, aged 72. He was known especially for his researches on the gases of the blood, on the poisons of the air and on carbon monoxid. In one of my letters (THE JOURNAL, Feb. 6, 1909, lii, 487) I mentioned his researches to promote the safety of mines and prevent fire-damp catastrophes.

Death of Dr. Hennequin

Dr. Hennequin, member of the Société de Chirurgie, who was an advocate of continuous extension in the treatment of fractures, died March 24. His remarkably ingenious devices were celebrated, and he was often called on by heads of the hospital services of Paris to apply them. A few years ago, in collaboration with his pupil, Dr. R. Loewy, he published a treatise on the practical treatment of fractures of the long bones.

The Number of Medical Students in France in 1910

The Ministry of Public Instruction has just published the results of the annual investigation into the number of students in the French universities. On January 15 last, there were in our 16 universities a total of 40,131 students, male and female, of whom almost half (17,512) are in Paris. Of this number the colleges and schools of medicine had at that date 9,721 students (8,029 medical students in the colleges and 1,692 in the schools). After Paris, which has 2,857 medical students, the colleges are ranked in the following order, according to the number of students: Lyons (746), Bordeaux (740), Montpellier (504), Nancy, Toulouse, Lille and Algiers. Among the schools Marseilles is at the head with 285 students, then Rennes and Nantes. Out of the total of 9,721 medical students enrolled in the colleges and schools there are 1,143

foreign students, among whom the Russians are most numerous (515 at Paris, 137 at Montpellier, 29 at Nancy, etc.); then come the Turks (62 at Paris), the Roumanians (43 at Paris), the Greeks, the Bulgarians, etc. The colleges and schools of medicine are attended by a total of 1,074 women students, of whom 565 are French women and 509 foreigners. The Paris college of medicine alone has 508 women students and that of Montpellier 117. The students of pharmacy number 1,448.

Imposition of a Special Tax at the Climatic and Mineral Water Stations

The Chamber of Deputies has just passed a bill according to which the communes which possess mineral springs or climatic advantages may be officially recognized as mineral water or climatic resorts or "stations." On their own demand, these stations may be authorized to collect during the whole or part of the year a special tax, the revenue from which may be entirely devoted to sanitation or to embellishments intended to increase the popularity of the resorts. The stations also may undertake the treatment of the poor. The tax in question is a tax on transients not domiciled in the commune. The rate may be so much for each person for each day of sojourn, or so much per person independent of the duration of the stay. It may be based on the nature and the price of the lodgings occupied, etc. In any case the tax will not be due from any one longer than a month. The bill provides, moreover, for the formation of a permanent commission, under the ministry of the interior, mineral water and climatic stations of France.

A Projected Organization of Medical First Aid on the Public Thoroughfares of Paris

At its last general assembly the Medical Syndicate of Paris again considered the organization of a service of medical aid on the public thoroughfares. There are, at present, first-aid stations in connection with all police stations, where persons injured on the public thoroughfares are first taken, and where are found medicines, dressings and means of transportation for injured persons, but no physicians. Unfortunately, the administration, up to the present, has concerned itself only with the transportation of injured persons to the hospitals, and has completely neglected the organization of the service to give immediate medical attention on the spot. There is, however, in Paris a night medical service which gives excellent results (THE JOURNAL, Oct. 9, 1909, liii, 1201), and it may be asked why the organization which works satisfactorily from 10 in the evening until 7 in the morning, every night, cannot be utilized from 7 in the morning until 10 in the evening. Of course, it is difficult to find physicians at their offices every hour in the day, but for a system of first aid by day, analogous to the night first aid, about thirty physicians would be sufficient in each quarter, each one being present at his office or at the first-aid post for two or three hours each day for a week. If one remembers in certain arrondissements in Paris, there are each day, on an average, three accidents or attacks of illness on the public thoroughfares, which makes about 20,000 a year, it may easily be seen what valuable service such an organization would render to the population of Paris. The Medical Syndicate of Paris adopted the following resolutions: 1. The first-aid posts in each quarter of Paris should be organized so that first aid should be rendered there by physicians. 2. Policemen should receive orders to take to these posts all those injured or taken ill on the public thoroughfares. 3. The medical service should be supplied by rotation among all the physicians of the quarter who have themselves enrolled. 4. Fees should be regulated by an agreement reached between the administration and the medical service.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 31, 1910.

Personal

Professor Grouven has been appointed director of the policlinic for skin diseases as successor of his former chief, Prof. E. Hoffmann, who, as previously announced, is going to Bonn in place of von Doutrelepont. Here a certain bargain has occurred which allows one to infer certain transactions behind the scenes. Other vacancies in the universities have been filled in a similar way, only that the bargain is not always so plain as here.

Medical Sunday Rest

For a long time physicians have been trying to obtain some respite from the slavery of their profession, at least on Sundays and holidays. This has been partly secured by the agreement of certain physicians for a mutual exchange of services, so that alternately on a Sunday or a holiday one of the physicians is on duty and the other at leisure. In recognition of this justifiable effort, the administration of the kingdom of Saxony a short time ago published a decree which officially brings this arrangement to the knowledge of the public. According to the decree, inasmuch as it is often difficult on Sundays and holidays to obtain prompt medical aid, a voluntary medical service has been established in Dresden and Leipsic for Sundays and holidays according to which physicians shall in turn remain at home, and every one who is in need of medical services can learn the name and residence of the physician who is on duty, either at the residences of physicians or at the police stations. This arrangement is not only in the interest of the general convenience of the public but also a benefit to the physicians themselves as they can enjoy better rest on Sundays and at night than formerly. As a similar arrangement should be established in other cities and in the large rural communities where there are several physicians, the district authorities of places where it appears suitable are urged to cooperate with the proper authorities as well as with the medical societies of the district in an advisory way.

Campaign Against Infant Mortality in Bavaria

In a decree of the government published a few weeks ago the principles that are to govern the managing authorities and district physicians in the matter of infant hygiene are stated. Three departments are made: Outside care of infants, institutional care, and the protection of mothers and guardianship of illegitimate children. In the outside care the greatest stress is laid on educational measures, which are to be carried out, (1) by the distribution of leaflets; (2) the publication of a professional journal by the Bavarian bureau for hygiene of infants and the recommendation of good books on the care of mother and child, and (3) the delivery of lectures. The outside care will be further promoted by consulting stations, nursing premiums, midwife premiums and lying-in assistance.

The consulting stations under the supervision of physicians are to advise mothers in the care of healthy and sick infants, to encourage breast feeding and to improve the capacity of mothers in this respect where necessary. Premiums are to be given in the form of money or provisions to compensate for the decreased earning power of nursing mothers. No investigation as to worthiness and no distinction between legitimate and illegitimate children will be made, the object being to preserve the life of the infant.

Midwives are to be given prizes to induce women to nurse their infants or to take them to the consulting stations. Milk depots are to be established in close connection with the consulting stations, under the supervision of physicians, to furnish raw milk to nursing mothers or properly modified milk for infants requiring it, and also unobjectionable milk for older children. Artificial food is to be given only when paid for. Milk for infants is to be given only on prescription and fixed milk mixtures are to be avoided. Communities or societies by payment at the milk depots can get tickets for distribution to the poor.

Homes and crèches are to be established to receive children for the first three years, without reference to religion or parentage, for daily care at the cost of the food furnished. The crèches will meet the needs of working women, and will be under the daily supervision of a physician. Not more than six infants or twenty older children are to be placed under one nurse, and nutrition is to receive special attention. Mothers are to be given opportunity to nurse their children in the institution, and the institutions are to be located in factory districts convenient of access to working mothers. To avoid the spread of contagious diseases, crèches are to be separate from institutions for continuous care, and isolation rooms are to be provided for cases of suspected illness. Firms employing nursing women shall allow them time for nursing their infants without deduction of pay.

Sanatoria are to be provided for the medical treatment of infants with acute diseases, and are to receive especially unprotected and abandoned children requiring institutional care. Nursing mothers are to be admitted in limited number to supply natural nourishment in case of need. Nurses will be trained in these institutions.

Provision is to be made that working women shall be relieved from severe bodily labor in the last weeks of their pregnancies. Intelligence bureaus are to be established in the country to advise women regarding these arrangements. In larger communities homes for lying-in women and mothers are to be established for women needing care after delivery or for whom no appropriate home is provided.

Pharmacology

VACCINE VIRUS AND TETANUS ANTITOXIN

Committee of Section on Pathology and Physiology Recommends Their Admission to the Pharmacopeia

To the Section on Pathology and Physiology: Your committee recommends that vaccine virus and tetanus antitoxin be admitted to the Pharmacopeia, and submits the following report:

VACCINE VIRUS

Vaccine virus was the first and it is the oldest and best specific preventive known. It is a drug in the broadest sense of the term, and as such is handled by every pharmacist. One of the first advantages in admitting vaccine virus into the Pharmacopeia would be to establish for it an official and legal name. This would help to avoid much confusion now existing on account of the bacterial vaccines and other substances called "vaccines" used in the prevention and cure of disease. For almost a hundred years vaccination was a specific term limited to the introduction of the virus of vaccinia into the skin for the prevention of smallpox. In recent years the term "vaccination" has been used in a generic sense to include the introduction of many different substances, in many different ways and for many different purposes. To establish a definite and accurate nomenclature is one of the most important functions of the Pharmacopeia.

To include vaccine virus in the Pharmacopeia would be one of the best means of calling the attention of all pharmacists to the fact that it must be kept in a cool, dry place, etc. Much of the vaccine virus on the market is inert, because not properly handled in the trade. Hence, concise, authoritative directions in the Pharmacopeia would have an educational value and would help to prevent smallpox and save life.

The objection that vaccine virus is an indefinite substance, the "active principle" of which is not known, is no longer valid, for the Pharmacopeia contains many such substances, including the ferments, against which a similar objection holds.

The objection that vaccine virus cannot be "assayed" by the average druggist also lacks force when we recall that the potency and purity of vaccine virus in interstate traffic is cared for by the federal government under the law of July 1, 1902, which relieves the pharmacist of the responsibility. Further, other substances, such as serum antidiphthericum, the testing of which requires special training and special laboratories, have been admitted to the Pharmacopeia.

The Pharmacopeia should briefly state the essential requirements of the law above mentioned concerning false labeling or marking of any package or container of vaccine virus; requiring further that each package of vaccine virus must be plainly marked with the proper name of the article, the name, address and license number of the manufacturer, and the date beyond which the contents cannot be expected, beyond reasonable doubt, to give specific results. Such information in the hands of every druggist will serve an educational purpose and also help the federal authorities in the rigid enforcement of the law.

The Pharmacopeia should briefly state the method of preparing vaccine virus and specify the difference between glycerinated preparations and dry points and the other forms on the market. As a precedent, it may be stated, that the Belgian Pharmacopeia (third edition, 1906, page 194), has introduced vaccine virus under the title of "vaccinum" and the Swiss Pharmacopeia (fourth edition, 1907, page 512), has introduced vaccine virus as "vaccinum," synonyms: "Kuhpockenimpfstoff," "vaccine," "vaccin jennérien," "vaccino jenneriano."

TETANUS ANTITOXIN

We recommend that tetanus antitoxin be admitted into the Pharmacopeia for the reason that this is now a well-established, useful prophylactic; that its mode of action is understood, and that a satisfactory method of standardization exists by which uniform potency is assured.

An American unit for measuring tetanus antitoxin was established on the authority of the act of July 1, 1902, by the Public Health and Marine-Hospital Service (see Hygienic Laboratory Bulletin No. 43). This unit was promulgated Oct. 25, 1907, and is now used by all the manufacturers of tetanus antitoxin in this country, and in some cases abroad.

Tetanus antitoxin should be admitted into the Pharmacopeia on the same terms, with similar definition and similar text to that used in the case of diphtheria antitoxin.

On account of the lack of methods for determining satisfactorily the potency of other biologic products, we think it advisable not to admit them into this revision of the Pharmacopeia.

E. R. BALDWIN,
GEORGE H. WEAVER,
M. J. ROSENAU,
Committee.

Iron Tropon

An inquiry has been received as to the composition and value of Iron Tropon. The composition of this product seems to have varied from time to time. The manufacturers formerly stated that it contained fat, sugar, pepsin and iron in organic combination with albumin, and its use was advocated both as a food and as a medicine. It was not claimed to contain over 1 per cent. of pepsin, but tests failed to show that it contained any pepsin, or if any, such a small amount that there was not sufficient to digest the albumin in Iron Tropon itself. It was also claimed that the iron, being in organic combination with the albumin, possessed advantages over the widely used aromatic fluid preparations of iron. Tests, however, showed that the iron was not in organic combination, though even had it been, late investigations fail to demonstrate the superiority of the organic over inorganic iron compounds.

The manufacturers state in their later "literature" that Iron Tropon is a tonic and a food; that it is a compound of the food albumin tropon, 2.5 per cent. of iron in its most assimilable form, and enough chocolate to flavor it agreeably. It will be noted that they now make no claim for pepsin, nor do they state that it contains iron in organic form. In the dose recommended, a teaspoonful three times a day for an adult, the patient gets something over a grain of iron, and he might as well take an equivalent quantity of Blaud's mass, the value of which has been proved.

As a food, Iron Tropon, weight for weight, is about equal to beans and a little better than flour, although it contains a larger percentage of protein than either. In the dose stated, an invalid would get about 50 calories, or about 1/40 the necessary nourishment for a day. Tests also have shown that the albumin is difficult of digestion. In spite of this fact, the advertisement of Iron Tropon states: "A patient who takes Iron Tropon receives not only the benefit of iron medication, but at the same time his economy is supplied with perfectly assimilable albumin in sufficient quantity." It will thus be seen that the claim for pepsin in this preparation has been abandoned, that the statement as to the iron being in organic form has been modified, and that the food value of the albumin is exaggerated; but perhaps the manufacturers do not expect the physician to apply his arithmetic to such problems.

Iridium

Dr. C. A. Dexter, Columbus, Ga., asks for information concerning the use of iridium in the treatment of acute and chronic rheumatism. Iridium is a well-known element although we have not found that it has been used as a medicine; however, we presume our correspondent refers to "Iridium (Medicinal)," sold by the Platinum Company of America. We are not able to locate this company, but in their advertising circular "Iridium (Medicinal)" is said to be "an agent for the blood, a laxative, an alterative, indicated in all disorders of the stomach, in Jacksonian epilepsy," and "a specific in rheumatism." As to its origin, it is said in the circular, "the platinum sands are associated with and composed of iridium" and some other elements, so that as far as the circular gives information the nostrum is alleged to contain the element iridium.

A few statements quoted from the circular will show that the person who wrote it knows nothing about medicine and cannot correctly use the English language: "The qualifications of Medicinal Iridium are its simplicity, purity, harmless under prolonged use, easily borne by the stomach." "It has been observed that when Medicinal Iridium acts as a laxative, it will regulate the same." "Called the family group, Iridium and Osmium are destined to become the world's benefactors in medicinal properties, thereby creating a new chapter in medical science." The circular quotes some supposed "excerpts from hundreds of letters on file, written by physicians, in the hope they may attract your attention," which bear marks of having been written by the same person who wrote the circular. Note the quality of the following statements: "Iridium

has a power, purity and simplicity that pleases me; now I can make progress." "I say to you frankly, Iridium is my standard. I can get results and make progress. I am confident it aids the fibrin in the blood." "Dr. X. is pushing Iridium on five or six cases." It is not explained who Dr. X. is, but it has this to say about him: "Dr. X. is an eminent practitioner. He has made a remarkable record with Iridium and has so far never failed on cases of Jacksonian epilepsy, experimental tests have shown that Iridium increases blood corpuscles."

The man who signs himself president of the Platinum Company of America is said to be a lawyer, but is not working at it, and was formerly a promoter, fiscal agent, etc. It should not be difficult for the physician to fix the status of iridium under this sort of exploitation.

Mrs. Winslow's Soothing Syrup—Another Baby Sacrificed

Numerous cases of poisoning have been reported[1] at different times in The Journal from the use of "soothing syrups" administered to infants. "Kopp's Baby's Friend" and "Mrs. Winslow's Soothing Syrup" have proved especially vicious in this connection. The newspapers recently contained a news item from Cheyenne, Wyoming, to the effect that an infant had been accidentally poisoned by its mother administering a "patent soothing syrup"—the name of the nostrum not being given. Dr. C. Y. Beard, Cheyenne, Wyoming, who was reported as having been called in just before the infant's death occurred, writes as follows in response to our request for the facts:

"I was called at 2:30 a. m., March 26, 1910, to see Edna N., a well nourished babe of ten months. I found the child lying on the bed, breathing somewhat irregularly, but very slowly; there was noisy gurgling in the throat from retained secretions; the skin was waxy and somewhat cyanotic; the pulse about 50 and intermittent; the limbs were cold; there were pin-point pupils; the limbs and abdomen were insensible to pinching and to the extremes of heat and cold; the child could not be aroused enough to swallow. The usual stimulation from atropin, strychnin and alcohol with external heat failed to revive the child, who died at 4 a. m. On first inquiry the mother said the child had been given no medicine internally, but when I insisted that it was under an opiate she admitted the child was cross the afternoon before, and that an old lady advised giving her a dose of Mrs. Winslow's Soothing Syrup. This was secured from a nearby drugstore, and one teaspoonful, the designated dose, was administered about 5 p. m. The babe soon exhibited restlessness, which lasted about thirty minutes. She then fell into a sleep which they thought a very natural one until about midnight, when she began tossing her head from side to side with no motion of limbs or body. It was then found that she could not be aroused. The family physician was called, but he was out of town and I was summoned. A verdict of 'Accidental poisoning from morphin contained in Mrs. Winslow's Soothing Syrup' was given at the coroner's inquest."

Correspondence

Circulatory Changes in Chronic Nephritis

To the Editor:—In your editorial in The Journal, March 19, on "The Circulatory Changes in Chronic Nephritis," you review a purely mechanical explanation, and a theory that you call "the alternative hypothesis," attributing the cardiac and vascular phenomena of chronic nephritis to chemical excitation of the walls of the vessels by pathologic constituents of the blood.

I suggest the propriety of considering another theory. I have formed a belief that the high blood pressure found in cases of defective kidney action is a compensatory phenomenon. Whenever any functional activity is required of an organ in the body, there is always a tendency to a rise of blood pressure, just as an engine puts on more steam to go up hill. When the kidneys are required to remove from the blood waste products circulating in it, there is a tendency to increased blood pressure. When the kidneys are permanently defective, this increase of blood pressure becomes permanent, resulting in changes in the heart and blood vessels, due to a constant demand for a high blood pressure. Clinical studies of the relations of blood pressure have been to me almost a life work so I cannot in the space of a letter enter into a complete elaboration of my own conclusions, though I am sure the mere naming of the theory that the blood pressure of chronic nephritis is a compensatory phenomenon, rather than the mechanical result of obstruction or the chemical result of irritation of the walls of the blood vessels, will be sufficient to suggest the details. The mechanism by which blood pressure is raised is not clearly understood, and it is barely possible that the compensatory demand for a high blood pressure may be supplied through the action of an increased adrenalin formation.

We are not surprised at hypertrophy of the heart when a greater demand is made on it; we are just become accustomed to the idea of hypertrophy of the blood vessels; and we must become accustomed to hyper-development of blood pressure under conditions of greater demand.

Louis F. Bishop, New York.

[Comment: Dr. Bishop's suggestion does not seem to be an attempt at explanation of the physiology of the processes, but only a teleologic theory. While scientific men as a rule hesitate to deal with teleology it does seem probable that the circulatory changes in chronic nephritis are purposeful; but the important thing for the investigator is to determine, if possible, how the changes are brought about. It was with regard to this point that our editorial was written.—Ed.]

The Double Hernial Sac

To the Editor:—In The Journal (March 26, 1910, liv, 1049) is an article on "Rare Variety of Hernial Sac." Thinking it may be of interest to the readers of The Journal to know how accurately this unusual condition was described at the beginning of the eighteenth century, I give below a translation of a description by Le Blanc (Précis d' opérations de chirurgie, Paris, Méquignon, 1782, i, 58) as follows: "The hernial tumor should be examined to see if it is not composed of two hernias. Several practitioners in operating have found two hernias which passed through the ring on the same side and which formed only one tumor in the scrotum. These hernias had each its individual sac, in each of which was contained a loop of intestine or a portion of the omentum or both together." ["Il faut même examiner si la tumeur herniaire n'est pas composée de deux hernies. Plusieurs Practiciens (M. Mery, Mémoires de l'Academie Royale des Sciences ann. 1701, p. 277; M. Mertrud et M. Arnaud, Mémoires de Chirurgie, ann. 1768 Londres, pp. 78-79) ont rencontré en opérant, deux hernies qui passoient l'une et l'autre par l'anneau du même côté, et qui ne formoient qu'une seule et même tumeur dans le scrotum. Ces hernies avoient chacune leur sac particulier, dans chacun desquels étoit contenu une anse d'intestines, ou une portion d' epiploon, ou tous les deux ensemble."]

Walter M. Boothby.

The Dire Possibilities in Handwritten Copy

To the Editor:—One of your compositors—or is it the proofreader?—is a great artist. He made me shed tears. I laughed and cried when I read in The Journal, April 9, page 1220, Latin "incurables," thinking I had written incunabula; my ecstasy increased when on the same page, while I believed that Weir Mitchell was where he belongs, in a haven full of muses, he was reported to have flirted with a "harem full of nurses." Too bad! Please correct.

Would you care to know that other compositors are as accomplished as yours? Here are some corrections they have invented for me. You may enjoy them. I once spoke of a hospital as a source of relief and salvation. They made it "starvation." I spoke of thyroid in different forms of cretinism. They made it "criticism." I quoted Cicero's dictum, according to which unless what we do is useful it is sterile. They made it "striped." I spoke of my Therapeutics of Infancy and Childhood. They made it "Infantry." I meant the modern Hippocrates. They made him "hypocrite."

A. Jacobi.

1. Brief abstracts of all these cases are given in the latest edition of the Propaganda for Reform pamphlet

Association News

OFFICIAL CALL

Sixty-First Annual Session of the American Medical Association at St. Louis, June 7-10, 1910

The sixty-first annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 7, 8, 9 and 10, 1910, at St. Louis, Missouri.

The House of Delegates will convene at 10 a. m., Monday, June 6. In the House, the representation of the various constituent associations for the years 1910 to 1912, is as follows:

Alabama	3	Louisiana	2	Ohio	7
Arizona	1	Maine	1	Oklahoma	2
Arkansas	2	Maryland	2	Oregon	1
California	3	Massachusetts	6	Pennsylvania	9
Colorado	2	Michigan	3	Philippine Islands	1
Connecticut	2	Minnesota	2	Rhode Island	1
Delaware	1	Mississippi	2	South Carolina	2
Dist. of Columbia	1	Missouri	5	South Dakota	1
Florida	1	Montana	1	Tennessee	3
Georgia	2	Nebraska	2	Texas	5
Hawaii	1	Nevada	1	Utah	1
Idaho	1	New Hampshire	1	Vermont	1
Illinois	9	New Jersey	3	Virginia	3
Indiana	4	New Mexico	1	Washington	2
Iowa	3	New York	11	West Virginia	2
Kansas	2	North Carolina	2	Wisconsin	3
Kentucky	4	North Dakota	1	Wyoming	1

The twelve scientific Sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy, and the United States Public Health and Marine-Hospital Service are entitled to one delegate each.

The General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 7.

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 6, 7, 8 and 9, and from 9 to 10 a. m. on Friday, June 10.

WILLIAM C. GORGAS, President.

GEORGE H. SIMMONS, General Secretary.

THE ST. LOUIS SESSION

Railroad Rates and Special Trains—Further Announcement by the Committee on Transportation

Since the last report of the Committee on Transportation information has been received from the Southeastern Passenger Association, whose territory embraces states south of the Ohio and the Potomac and east of the Mississippi rivers that a fare of one and one-half cents a mile in each direction will be granted, which is practically a rate of one and one-half fares, the same as the other territories. The Southwestern Passenger Association has granted a rate of two cents a mile in each direction from all points in this territory to the eastern gateways.

In the trans-Missouri territory, which covers the states of Kansas, Colorado, Nebraska, Utah, Wyoming, North Dakota and South Dakota west of Missouri river, the regular tourist rates to Missouri river stations added to one and one-half fare rates from such stations to St. Louis and return will be in force.

For the special trains from Chicago to St. Louis over the Chicago and Alton railroad reservations may now be made of C. R. Davidson, assistant general passenger agent, Rector Bldg., Monroe and Clark streets, Chicago.

For the special trains from Kansas City, reservations may be made of W. H. Abel, assistant general passenger agent, Junction Ticket Office, Ninth and Main streets, Kansas City, Mo.

For the special train from Toledo, Ohio, application should be sent to E. L. Browne, district passenger agent, Clover Leaf Route, Toledo, Ohio.

For reservations over the New York Central lines from New York and the east, apply to L. F. Vosburgh, general eastern passenger agent, 1216 Broadway, New York.

For reservations over the Boston and Albany from Boston apply to A. S. Hanson, Boston.

Reservations should be made as early as possible in order that all may be accommodated.

M. L. HARRIS, Chairman.

Book Notices

CONSTIPATION AND ALLIED INTESTINAL DISORDERS. By Arthur F. Hertz, M.A., Assistant Physician, Physician in Charge of the Electrical Department and Demonstrator of Morbid Anatomy at Guy's Hospital. Cloth. Pp. 344, with 34 illustrations. Price, $4. London: Oxford University Press, 1909.

This monograph is a full consideration of the subject, but includes a great deal of original research by the author, the preliminary account of which gained him the Radcliffe Prize at Oxford University. He has devoted three years to research on the physiology and pathology of movements of the alimentary canal. These studies have been made by observing with the aid of the *x*-ray the movement of test-meals made visible by the admixture of bismuth salts. The book contains many diagrams illustrating the results of such examinations.

The scope of the book will be comprehended when it is stated that about 40 pages are devoted to the physiology of intestinal movements and of defecation; more than 100 pages to causes of constipation; 100 to symptoms and 80 to treatment.

In recent years many have believed that antiperistalsis occurs, but Hertz has failed to see any evidence of it in his numerous experiments and observations. He has seen a bismuth emulsion flow under a pressure of three feet of water from the rectum to the cecum, making the whole colon visible. "But the flow was produced solely by hydrostatic pressure." Moreover, *x*-ray observations show that there is very little variation in the rate of passage through different parts of the colon." The average times taken for a test meal are four and one-half hours to the cecum, six and one-half hours to the hepatic flexure, nine hours to the splenic flexure, and eleven hours to the commencement of the iliac colon. He finds that the progress through the colon is exceedingly slow except as it is stimulated by meals. Often no appreciable change could be detected after an hour, but the feces advanced considerably after a meal. Hertz confirms Cannon's statement that when the ileum pours its contents into the empty cecum characteristic sounds are audible, but he does not agree that they are produced rhythmically.

Owing to the comfort and health of many individuals who defecate only at long intervals it is difficult to define constipation exactly. Our author says that it is "a condition in which none of the residue of a meal taken eight hours after defecation is excreted within forty-eight hours." He divides all cases into two principal classes: first, those in which food is delayed in passing from the stomach to the pelvic colon; second, those in which there is not complete evacuation of the pelvic colon at proper intervals. In the first class passage through the intestines is delayed while defecation is normal, and in the second the reverse is true.

The first class he subdivides, first, into cases with deficient motor activity which may be due to, (a) weak intestinal muscles, (b) deficient reflex activity of the intestines, (c) inhibition of motor activity, and (d) enterospasm; second, into cases due to excessive force required to carry feces to the pelvic colon which may be due to, (a) obstruction by feces or foreign bodies and (b) narrowing of intestinal lumen.

The second class, in which there is defective defecation he subdivides into two groups, first, inefficient defecation from, (a) habitual disregard of call to defecate, (b) weakness of voluntary muscles, (c) unfavorable posture, (d) weakness of reflex, and (e) a hysterical condition; second, obstacles to efficient defecation from, (a) hard and bulky feces, (b) functional and organic stricture of rectum, (c) rectoceles, and (d) invagination. He elaborates this subject interestingly and fully and illustrates it with well-chosen cases.

Under the head of symptoms he discusses those produced by constipation and provocative of it; as well as briefly some of the diseases producing it. It is unnecessary to comment to any extent on this portion of the book. The author does not describe the dyspnea sometimes associated with constipation as well as he might. He says also that albuminuria and cylindruria occasionally result from constipation. Our observation is that they often do.

His discussion of prophylaxis is excellent, although he adds nothing to what is known. Moreover, what is said of treatment can only be commended. The whole subject is thoroughly considered; all the measures from suggestion to surgery are de-

scribed and their value weighed. In passing it may be noted that he disagrees with many in thinking that olive-oil enemas soften fecal masses less than water. Nevertheless he gives these enemas their full quantum of praise but assigns other and sufficient reasons for their utility.

The book is excellent and the author is to be congratulated on his good work.

A HANDBOOK OF MEDICAL DIAGNOSIS. By J. C. Wilson, A.M., M.D., Professor of the Practice of Medicine and Clinical Medicine in the Jefferson Medical College. Cloth. Pp. 1412, with 408 illustrations and 14 full-page plates. Price, $6. Philadelphia: J. B. Lippincott Co.

There are already many excellent books on medical diagnosis. It must have taken a good deal of courage for Dr. Wilson to come on the stage asking the favor of the medical audience for still another work on the same subject. His justification for such an act is, as he tells us in the preface, not only the expressed wishes of colleagues and the needs of successive classes of pupils, but the conviction that something different in method and a new arrangement of details were urgently needed. We confess that before looking at the book critically we were skeptical as to finding much that was new, even in arrangement and method of handling. But it is a pleasure to state that the author has fulfilled his promise and an eminently satisfactory book is the result. The four parts into which the book is divided are: (1) "Medical Diagnosis in General;" (2) "The Methods and Their Immediate Results;" (3) "Symptoms and Signs;" (4) "The Clinical Applications." In a sense each one of these parts is a complete whole. There is little overlapping or repetition. Part 2, for instance, could be printed as a small volume on laboratory and physical methods of examination. Part 3 is a brief yet comprehensive discussion of symptoms and signs and their significance. Here are treated such phenomena as fever, cough, pulse, vomiting, tenesmus, edema, paresthesia, vertigo, convulsions and tremor. In the last part is an excellent and discriminating treatment of the subject of the clinical application of what has gone before, in the diagnosis of medical diseases. The practitioner, therefore, may utilize the book in a variety of ways. He may go directly to the pages discussing the diagnosis of the disease he believes he has in hand or may turn to its most striking symptoms, the interpretation of which is not clear to him, or may find directions as to laboratory technic for tests helpful in diagnosis of the case he has in hand. It is this combination of these four parts, with their distinct characteristics yet intimate correlation, that makes the book especially valuable to the practitioner. Its aim is to be practical rather than theoretical. In this endeavor the author is successful. Little space is taken up with hypotheses and theories, few names of authorities are mentioned, and almost no bibliographic references are given. Criticism on this score might easily be made, for such a plan carries with it more or less of dogmatism in the way of making statements. We feel, however, that our author has been wise in electing to follow this method. We see everywhere the marks of the up-to-date physician of wide experience in hospital and private practice, and the one who knows the needs of the student struggling to master the rudiments of diagnosis and the perplexities of the general physician who becomes tangled in trying to solve the mysteries of the complicated concrete case.

Dr. Wilson's style is scholarly and clear. The illustrations are excellent and most of them really show what they were designed to show; they are in no sense put in for mere display or for padding. The work assigned to others, for instance, nervous diseases, the eye, the stomach, the *x*-ray, and some of the laboratory work, has been well done. It bears unmistakable evidence of the editorial supervision and active participation of Dr. Wilson. The book, while containing over 1,400 pages is, because of paper and type, not unduly bulky. Larger type, thicker paper, a little increase in the size of illustrations, a little wider spacing, might easily have been employed to make two or even three volumes that would have sold for double the amount charged for this one volume. We feel that the book represents a sincere effort on the part of the author and the publishers to put forth a good, honest book, and that they have succeeded. Whoever buys this work may feel that he has one of the very best.

THE OPEN-AIR OR SANATORIUM TREATMENT OF PULMONARY TUBERCULOSIS. By F. Rufenacht Walters, M.D., Physician to the Crooksbury Sanatorium. Cloth. Pp. 323, with illustrations. Price, $2.25 net. New York: William Wood & Co., 1909.

Dr. Walters has been connected with sanatoriums for consumptives in England for many years and writes this book from abundant experience. There is nothing new in it, but it contains an excellent and full account of what is to-day regarded as the best treatment for tuberculosis of the lungs. It can be heartily commended. If it is to be criticized at all it is because the author has combined two books in one cover, or rather one book and a supplement, for they cannot be read apart. The first half is intended for patients and laymen interested in the subject, as well as for medical men, and the last part for medical men more especially. This causes the consideration of most topics twice in a way which is not agreeable to the reader. Much of the matter in the last part could have been incorporated in the first with advantage to patients, and much of the remainder could have been put in long foot notes; as, for instance, details of the various tuberculin tests, of tuberculin treatment, and of many other subjects.

The author looks on exercise, in cases for which it is adapted, as necessary "to increase resistance to tuberculosis by causing the absorption of a small dose of tubercle poison." The exercise should be "such as will give a dose just short of what will cause constitutional disturbance."

He does not believe in indiscriminate stuffing. Patients whose weight is up to standard need not be fed to gain more. Exercise to harden them may necessitate more food. Moreover, when patients have fever they often need more food. He believes also that most consumptives take too little fat.

The volume contains in its second part much detailed information of importance to physicians treating such patients.

MODERN SURGERY (GENERAL AND OPERATIVE). By John C. Da Costa, M.D., Professor of Surgery and Clinical Surgery in Jefferson Medical College, Philadelphia. Sixth Edition. Cloth. Price, $5.50 net. Pp. 1502, with 966 illustrations. Philadelphia: W. B. Saunders Co., 1910.

This work, which has reached its sixth edition in a comparatively few years, has received a number of notices in these columns in the past.

Notwithstanding the fact that it is less than three years since the fifth edition of this surgery appeared, almost every section has been altered or added to for the sixth edition. Among new matter particular mention may be made of arteriorrhaphy, a procedure which is founded on the investigations of Murphy, Carrel and Matas; Crile's arteriovenous anastomosis for effecting transfusion of blood; Brewer's tubes for transfusion; the use of Halsted's aluminum bands in the treatment of aneurism; the operative treatment of recent fractures; Horsley's operation for chronic spinal meningitis; the use of positive and negative air-pressure in intrathoracic surgery. Murphy's method of treating acute peritonitis; Cushing's operation of decompression for brain tumors; Bier's intravenous local anesthesia; the parathyroid glandules; the intraglandular extirpation of goiter; the Lorenz treatment of hip-disease by weight-bearing and fixation; cystoscopy and catheterization of the ureters; Bier's treatment of inflammation; Wright's views on inflammation; immunity with a sketch of antibodies, of opsonins and phagocytosis; bacterial vaccines; Wassermann's reaction for syphilis and numerous other subjects. The new matter added has been judiciously selected, and while the volume has increased somewhat in size it has not yet reached unwieldy proportions. The work is an excellent one and one of the most complete of the single-volume surgeries.

IONIC SURGERY IN THE TREATMENT OF CANCER. With a Chapter on Ionization in Surgical Tuberculosis and in Hemorrhoids. By G. Betton Massey, M.D., Attending Surgeon to American Oncologic Hospital. Cloth. Price, $3. Pp. 239, with 80 illustrations. New York: A. L. Chatterton Co., 1910.

In this book, part of which has appeared in the form of articles in journals devoted to electrotherapeutics, the author urges the giving of greater attention to correct diagnosis in the early stages of malignant growths, and emphasizes the importance of treatment at this time. He discusses the nature of malignant growths, the search for possible cancer germs, and the differential diagnosis, as well as the destruction of these tumors by the local cataphoric diffusion of metallic ions. He gives the details of his method of treatment as well as a

description and choice of apparatus. Cases are reported of malignant tumors of various parts of the body cured after ionic treatment, and photographs are reproduced of the patients before and after operation.

THE ESSENTIALS OF CHEMICAL PHYSIOLOGY FOR THE USE OF STUDENTS. By W. D. Halliburton, M. D., Fellow of the Royal College of Physicians. Cloth. Price, $1.50. Pp. 280, with 71 illustrations. Seventh Edition. New York: Longmans' Green & Co., 1909.

When a text-book has run through six editions in a few years its place as a standard may be regarded as established. Halliburton's "Essentials of Chemical Physiology" is exactly what its title proclaims it to be; the essentials of the subject are considered systematically and concisely, while clearness of exposition is not sacrificed to brevity. In this latest edition the author has added, with much discretion and good judgment, the most important recent advances. If the student uses this book as a basis for his study of physiologic chemistry, and does a proper amount of collateral reading from more extensive treatises, he should secure a good understanding of the subject: the danger is that with such a compact little epitome as this he will be content with its contents and fail to seek wider sources of information. We may add a particular word of approval of the expression "chemical physiology," for the reversed term, "physiologic chemistry," has commonly led to a misappreciation of the field covered and objects sought by most of the workers in this branch of science.

EUGENICS. The Science of Human Improvement by Better Breeding. By C. B. Davenport, Carnegie Institution of Washington, Director Department of Experimental Evolution. Cold Spring Harbor, N. Y. Cloth. Price, 50 cents net. Pp. 35. New York: Henry Holt & Co., 1910.

This neatly gotten up booklet contains an essay which the author read by invitation before the American Academy of Medicine at Yale University, Nov. 12, 1909. Davenport adopts unquestioningly the Mendelian theories of heredity and applies them to human mating. Whether all would agree with him in such complete acceptance is a question. Some of his statements appear rather positive, such as that, so far as he is aware, there is no case on record where two imbecile parents have produced a normal child. Considering the relativity of the term "imbecility" and "normal," this assertion might be qualified. There are all degrees of general imbecility and of partial imbecility, which latter is frequently the accompaniment of genius in some other direction. It is also pretty safe to say that a perfectly normal individual is a rarity if he exists anywhere. An investigation into the relation between the "ordinary" and the "normal" human being might be both interesting and enlightening. The investigations along the line taken in this book, however, are in the right direction and the author has stated some approximate truths very well. The family trees given are striking as supporting his views regarding heredity.

LE GLOBULIN DES MAMMIFÈRES. Par le docteur M. Aynaud, Préparateur à la Faculté. Paper. Pp. 229, with illustrations. Paris: G. Steinheil, Editeur, 2 Rue Casimir-Delavigne, 1910.

This monograph on the blood platelets contains a comprehensive discussion of the anatomy, physiology and pathology of these, the least studied of all the blood elements. The author has been associated for some years with Achard in an active investigation of these structures, and includes his own observations with an ample background of the previous work of others, American investigators, we are pleased to notice, receiving recognition. J. H. Wright's important observations would probably receive more consideration by Aynaud if the latter had seen Wright's preparations instead of mere inadequate photographic reproductions. The broad and liberal discussion of the topic assures this monograph a stable place in the literature of a baffling subject, while the simplicity and clarity of the text is refreshing to one who has often had to beat his way through the average German monograph of similar nature and scope.

EMERGENCY SURGERY. For the General Practitioner. By John W. Sluss, M.D., Professor of Anatomy, Indiana University School of Medicine. Second Edition. Flexible Leather. Price, $3.50 net. Pp. 747, with 605 illustrations. Philadelphia: P. Blakiston's Son & Co., 1910.

The second edition of this book has been changed in certain chapters to meet criticisms offered, additions to others have been made, and it also contains an entirely new chapter on Cesarean section. A number of new illustrations have been added to the large number of the former edition, some of which do not add to its value. Some subjects are still included in the book which could not strictly be regarded as coming under the head of emergency surgery, but perhaps that is not a serious criticism. A serious one is that the author has not advised sufficient caution in the use of spinal anesthesia, which is one of the new topics included in this edition. Spinal anesthesia should not be attempted by the general practitioner, perhaps, nor by any one else outside of a hospital. The inclusion of the new topics has somewhat enlarged the book, which remains a practical and useful guide for the general practitioner, who necessarily does some surgery.

CLAIMS ARISING FROM RESULTS OF PERSONAL INJURIES. The Relation Injury Bears to Disease and Disease to Injury. By W. Edward Magruder, M.D., Associate Professor of Clinical Medicine, College of Physicians and Surgeons. Cloth. Price, $2.50. Pp. 266. New York: The Spectator Company (1910).

Dr. Magruder's book is a compilation with an extensive bibliography on the relation between injury and disease, with especial reference to the manner in which certain diseases may add to claims for injuries by retarding recovery. Dr. Magruder states in the preface that efforts to find in medical literature the information needed to assist him in passing intelligently on the problems which daily arose in his work led him to the compilation of this volume. Overe fifty diseases are considered with special reference to their relation to injuries. Additional chapters have been added on tumors, *x*-ray burns, *x*-ray diagnosis and post-mortem examinations. The book is unique and will be of great value to all physicians engaged in insurance work as well as to lawyers and others needing references to current literature on this subject.

DUNKELFELDBELEUCHTUNG UND ULTRAMIKROSKOPIE IN DER BIOLOGIE UND IN DER MEDIZIN. Von N. Gaidukov. Paper. Price, 8 marks. Pp. 84, with 18 illustrations. Jena: Gustav Fischer, 1910.

A very useful review of the dark-field illumination and ultramicroscopy, with especial reference to medicine and biology, particularly botany. The author's researches lie in the field of the minute structure of cells. The importance of dark-field illumination in recognizing the *Spirochæta pallida* is given due prominence. A full bibliography is appended. The illustrations are good.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

DOSAGE OF ANTIPYRIN

Dr. Claude W. Fankes, Philadelphia, calls attention to an error in a prescription in the Department of Therapeutics, March 26, p. 1059. The dosage of antipyrin is given correctly in the metric system but incorrectly in apothecaries weight, by a typographic error. The prescription should read as follows:

R	gm. or c.c.	
Antipyrini	3	gr xl
Syrupi	30	or fʒiss
Aquæ menthæ piperitæ	ad. 100	ad. fʒiii

M. et Sig.: A teaspoonful, in water, three or four times a day.

This would be the dose of antipyrin for a child from three to four and one-half years of age.

DATA WANTED ON DANGERS OF COMMON COMMUNION CUP

To the Editor:—Please ask your readers if any one can furnish me with well-authenticated history of cases of contagion spread through the use of the "common cup" at the communion table? I shall be most grateful to any one furnishing me with such data, as some of our medical missionaries are having no easy undertaking in their efforts to show some of our clerical missionaries that now, while the church is young here, is the time to introduce the "individual cups" at the Lord's Supper. It is hard for me to understand how any one could object to introducing this reasonable, intelligent, clean and prophylactic measure at this stage of civilization, yet objection is made.

JOHN J. MULLOWNEY,
Methodist Episcopal Mission, Peking, China.

ANSWER.—No authenticated cases of disease traceable to the common communion cup have come to our knowledge. This may be due in part to the facts that the communion cup might not suggest itself readily as a possible source in the history of a case; that infection conveyed through this medium might have a more remote

origin (i. e., might have been conveyed by the lips of a healthy individual from an infected cup to the communion cup); and that, in some cases, sentiment might hinder a thorough investigation. The possibility of infection through this source was recognized as early as the fourteenth century, when the prevalence of the plague caused the temporary disuse of the common communion cup (Martin: *Med. Klin.*, Dec. 15, 1907; abstr. in THE JOURNAL, March 7, 1908, p. 786). Infection through this medium is an undeniable possibility. Cases of disease transmitted through common drinking cups are on record, and pathogenic bacteria have been cultivated from communion cups after use. (Mueller: *Deutsch. med. Wchnschr.*, April 6, 1905; abstr. in THE JOURNAL, May 27, 1905, p. 1722.) The practice of wiping the edge of the cup with a napkin after the use by each communicant offers no absolute security. The only satisfactory prophylactic measure would be the use of individual cups, each one either brought by the communicant for his own use, or, if furnished by the church, sterilized immediately before the service. At the present time, when many states are prohibiting the use of the common cup in public places, and many private concerns are, on their own initiative, abolishing the public cup in their establishments, it seems highly desirable that those institutions which stand as the representatives of religion and morality should not set an example of disregard of public welfare by clinging to a custom which is, to say the least, hygienically under grave suspicion.

DISPOSAL OF HUMAN EXCRETA

To the Editor:—Can you give me any information concerning the disposal of human excreta in small inland towns where a regular sewer system cannot be installed? The common privy or closet system is now in use, but I should like to find a way to improve it. In these towns the flies are not only a nuisance, but positively dangerous, and it occurs to me that by better disposition of the excreta we may be able to decrease the number of flies and possibly eliminate a very fruitful and dangerous source of infection. In my opinion more attention to the elimination of old *Musca domestica* and some of his relatives will greatly simplify the battle with the tubercle bacillus and the numerous enteric infections. Would occasional (say once a week) use of formaldehyde solution be efficient and economical, or would powdered unslaked lime be better?

B. E.

ANSWER.—Where sewers are not available the dry earth method of treating the excrement is inexpensive and less dangerous than the open privy. In order to prevent the leaching of the liquid portions into the soil with danger of contaminating springs or wells, even at considerable distances away, privy vaults should be built of concrete, or of stone or brick with cement lining. The bottom of the vault should be but a few inches below the level of the ground and should slope toward an opening in order to facilitate the removal of the contents. The receptacle may also be made more cheaply in the shape of a box, large pail or can placed on the ground level. This receptacle may be emptied conveniently, and, if it is of metal and without punctures, it is practically as safe as the concrete or cement-lined vault. Two or three inches of dry earth or ashes should be spread on the bottom of the vault, and each time it is visited a quantity of dry earth or ashes should be thrown down. If the earth used is top soil containing nitrifying bacteria, fermentation and putrefaction will be prevented and destruction of the excrement will be effected. In some army camps crude oil is sprinkled on the dejecta by each one who uses the latrine, a method which is effective in discouraging flies. Flies should be totally excluded from the privy by a close-fitting door, or by a screen if light is admitted. It is of advantage to admit the direct sunlight when the weather will permit for its effect in destroying odors and bacteria, provided that flies can be excluded; otherwise the place had better be dark. The vault should be cleaned often; in summer, about once a week. The work is not very offensive when enough ashes or dry earth is used to take up all the moisture. Besides, the action of the nitrifying bacteria very soon destroys the offensive material. The addition of unslaked lime with earth, as suggested, would also effect this. The use of formaldehyde, besides being expensive, would probably not be effective because it would not reach all portions of the material. When there is sickness in any family, either typhoid or any other transmissible disease, the greatest care should be taken in disposing of the stools of the person affected. They should be rendered liquid and treated with formaldehyde or the other disinfectants commonly used for this purpose before being disposed of in the vault with the dry earth covering. Extra care should of course be taken that no flies have access to these discharges.

If the material from the vault is to be used as fertilizer, it should be remembered that human wastes differ from the wastes of the lower animals chiefly in being much richer in nitrogenous matter, from which ammonia, and, finally, nitric acid, are derived. Consequently, unless thoroughly decomposed and mixed with large quantities of earth before being applied, they are destructive of plant life. From the point of view of human hygiene, it would be safest not to use such material around plants from which food is obtained, or, at least, not around those plants in which the edible product comes in contact with the soil, such as most vegetables and trailing small fruits, like strawberries.

A far better method of purification and disposal of sewage, which may be employed by individual property owners, though at some expense, is that by means of septic tanks or settling tanks, with removal of the residue at long intervals. This method is available where houses are provided with running water, either from a public supply or by means of the individual compressed air or gravity systems, which are frequently used now in country towns or on farms.

As to the elimination of flies, one of the most frequent breeding places of the domestic fly is in horse-manure, and other means besides exclusion from human feces would have to be employed to prevent the multiplication of this pest. If horse-manure is kept cleaned up in the stable and thrown into a screened bin or at once scattered, the fly nuisance in a community will be eliminated to a considerable extent.

The subject of sewage disposal in small towns is discussed in a paper by Dr. G. B. Lake in the *Journal of the Indiana State Medical Association* for February, 1909; abstracted in THE JOURNAL, March 27, 1909, p. 1062. References to other articles appearing in THE JOURNAL are as follows:

Fuller: Water-Supply and Sewage Disposal, THE JOURNAL, Oct. 7, 1905, p. 1059.

Moore: Sewage Purification by Septic Tank and Chemical Precipitation, THE JOURNAL, Aug. 24, 1907, p. 677.

Baker: Sewage Disposal—the Septic Tank, *Ill. Med. Jour.*, September, 1907; abstr. in THE JOURNAL, June 22, 1907, p. 2150.

Starkey: Economical Purification of Sewage in Rural Districts, *Brit. Med. Jour.*, Sept. 14, 1907; abstr. in THE JOURNAL, Oct. 12, 1907, p. 1314.

The lack of privies among the poor classes, especially in some parts of the South and the custom of depositing excretions on the ground, with the consequent soil pollution, are regarded as perhaps the most prolific means of the spread of the hookworm infection. A great campaign has been inaugurated throughout the South to do away with this custom and with the open privy, to which flies, birds, pigs and dogs have access, by which means also the hookworm infection is spread. The establishment of some sort of inclosed privies by means of which the dejecta can be taken care of properly is one of the necessary measures in the elimination of hookworm disease in the South.

The Public Service

Medical Department of the Army

Changes for the week ended April 16, 1910:

Baker, David, major, detailed instructor Camp of Instruction for infantry officers of the organized militia, State of Florida, St. Augustine, Fla., May 16 to 20, 1910.

Van Dusen, James W., major, left Fort Riley, Kan., en route to Fort Leavenworth, Kan., for duty as member of a general court martial to meet at that station April 11, 1910.

Bourke, James, capt., ordered to accompany detachment of troops from Fort Leavenworth, Kan., to the Presidio of San Francisco. On completion of this duty to return to his proper station.

Beeuwkes, Henry, 1st lieut., M. R. C., ordered to proceed to New York City, on official business pertaining to the Medical Department.

Wing, Frank F., dental surgeon, on arrival at San Francisco, will proceed to Fort D. A. Russell, Wyo., for duty at that station.

Mason, George L., dental surgeon, on arrival at San Francisco, will proceed to Fort Snelling, Minn., for duty at that station.

Skinner, George A., major, relieved from duty at Fort Lawton, Wash., and ordered to Fort D. A. Russell, Wyo., for duty.

Marrow, Charles E., major, relieved from duty at Fort D. A. Russell, Wyo., and ordered to Fort Lawton, Washington, for duty.

Maus, Louis M., col., left Chicago, on 10 days' leave of absence.

Gunckel, George I., dental surgeon, returned to Fort McPherson, Ga., from temporary duty at Fort Moultrie, S. C.

Oliver, Robert T., E. S. D. S., reports departure from detached duty at Fort Slocum, en route to his station, Fort Hamilton, N. Y.

Stearns, Charles H., 1st lieut., M. R. C., granted 15 days' leave of absence about May 10, 1910.

Powell, William A., capt., granted 3 months' leave of absence, with permission to go beyond the sea, when relieved from duty in the Philippine Division.

Holland, Josiah H., 1st lieut., M. R. C., granted 10 days' leave of absence.

Baker, Charles L., 1st lieut., M. R. C., will report to Capt. E. S. Wright, 1st Cavalry, Presidio of San Francisco, to accompany and for duty with troops to be stationed in Sequoia National Park, Cal.

Boards of Officers of the Medical Corps are appointed to meet at the places designated for the purpose of conducting examinations of applicants for appointment as 1st Lieutenants in the Medical Reserve Corps: Ancon, Canal Zone, Panama; Fort Andrews, Mass.; The Army General Hospital, San Francisco; Fort Banks, Mass.; Fort Benjamin Harrison, Ind.; Columbus Barracks, Ohio; Fort Crook, Neb.; Fort D. A. Russell, Wyo.; Fort Des Moines, Iowa; Fort Douglas, Utah; Fort Ethan Allen, Vt.; Fort George Wright, Wash.; Fort Howard, Md.; Jackson Barracks, La.; Fort Jay, N. Y.; Jefferson Barracks, Mo.; Fort Lawton, Wash.; Fort Leavenworth,

Kan.; Fort Lincoln, N. D.; Fort Logan, Colo.; Fort Logan H. Roots, Ark.; Fort McHenry, Md.; Fort McIntosh, Tex.; Fort McKinley, Me.; Fort McPherson, Ga.; Fort Meade, S. D.; Fort Monroe, Va.; Fort Moultrie, S. C.; Fort Oglethorpe, Ga.; Fort Porter, N. Y.; Fort Riley, Kan.; Fort Sam Houston, Tex.; Fort Screven, Ga.; Fort Sheridan, Ill.; Fort Sill, Okla.; Fort Snelling, Minn.; Fort Thomas, Ky.; Vancouver Barracks, Wash.; Walter Reed General Hospital, Takoma Park, D. C.; Fort Wayne, Mich.; Fort William H. Harrison, Mont.

Company C., Hospital Corps, Capt. William A. Wickline, Medical Corps, commanding, is relieved from duty at Fort Niagara, N. Y., and will proceed to the Walter Reed General Hospital, Takoma Park, D. C., for station.

Mills, R. H., dental surgeon, reported for temporary duty at Fort Ethan Allen, Vt.

Hill, Eben C., lieut., left Madison Barracks, N. Y., on 2 months' sick leave of absence.

Graham, George D., dental surgeon, left Fort Crook, Neb., en route to Fort Omaha, Neb., for temporary duty.

Medical Corps of the Navy

Changes for the week ended April 9, 1910:

Richardson, R. R., P. A. surgeon, detached from the Naval Hospital, Portsmouth, N. H., and ordered to the Naval Medical School, Washington, D. C., for instruction.

Asserson, F. A., P. A. surgeon, detached from the Naval Hospital, Boston, and ordered to duty at the Naval Hospital, Portsmouth, N. H.

Shippen L. P., asst.-surgeon, detached from the *Buffalo*, and from duty at Camp Elliott, Panama, Canal Zone, and ordered home; resignation accepted.

Johnson, J. T., acting asst.-surgeon, resignation as Acting Assistant Surgeon, dated July 27, 1909, accepted, to take effect April 18, 1910; detached from the Naval Medical School and ordered home.

Wieber, F. W. F., medical inspector, commissioned Medical Inspector from Dec. 13, 1909.

Bachman, R. A., P. A. surgeon, detached from the *St. Louis* and ordered to duty at the Naval Hospital, Narragansett Bay, R. I.

Jenness, B. F., P. A. surgeon, detached from the *Milwaukee* and ordered to the Naval Recruiting Station, Buffalo, N. Y.

McGuire, L. W., asst.-surgeon, detached from the *Montana* and ordered to the *South Dakota*.

Hermesch, H. R., asst.-surgeon, detached from the *South Dakota* and ordered to the *Montana*.

Changes for the week ended April 16, 1910:

Randall, J. A., P. A. surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to duty at the Naval Hospital, Olongapo, P. I.

Trible, G. B., asst.-surgeon, detached from the *Relief* and ordered home.

Dollard, H. L., asst.-surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to the *Relief*.

Sterne, C. F., asst.-surgeon, detached from the *Washington* and ordered to the *Iris*.

Duhigg, J. T., asst.-surgeon, detached from the *Iris* and from the Pacific Torpedo Fleet, and ordered to Washington, D. C., for examination for promotion.

Valz, E. V., asst.-surgeon, ordered home to wait orders on completion of examination for promotion.

The following officers have been commissioned Assistant-Surgeons: D. C. Walton, J. A. Bass, G. E. Thomas, C. B. Camerer, G. E. Robertson, W. H. Connor, A. B. Davidson, W. L. Irvine, E. W. Phillips, W. A. Bloedorn, A. B. Cecil, I. W. Robbins, H. E. Jenkins, C. R. W. French, S. D. Hart, F. W. Thompson, W. J. Riddick and J. A. McMullin.

DuBose, W. R., medical director, April 12, commissioned Medical Director from March 5, 1910.

Public Health and Marine-Hospital Service

Changes for the week ended April 13, 1910:

Brown, B. W., surgeon, granted 4 days' leave of absence from April 4, 1910.

Grubbs, S. B., P. A. surgeon, detailed to attend the annual meeting of the American Medical Association, to be held in St. Louis, June 7-10, 1910. Granted 1 month's leave of absence en route from and return to station.

Lloyd, B. J., P. A. surgeon, granted 7 days' leave of absence from April 6, 1910, under paragraph 191, Service Regulations.

McCoy, George W., P. A. surgeon, detailed to represent the Service at the meetings of the California Public Health Association and the State Medical Society, to be held in Sacramento, Cal., April 18-21, 1910.

Warren, B. S., P. A. surgeon, detailed to attend the meeting of the National Conference of Charities and Corrections, to be held in St. Louis, May 19-26, 1910.

Roberts, Norman, P. A. surgeon, granted 6 days' leave of absence from April 11, 1910, under paragraph 191, Service Regulations. Granted 7 days' leave of absence from April 17, 1910.

Collins, G. L., P. A. surgeon, granted 1 month's leave of absence from April 14, 1910.

Alexander, E., acting asst.-surgeon, granted 30 days' extension of leave on account of sickness from Feb. 26, 1910, and 30 days' annual leave from March 28, 1910.

Bailey, C. A., acting asst.-surgeon, granted 5 days' leave of absence from April 8, 1910.

Foster, S. B., acting asst.-surgeon, granted 15 days' leave of absence from April 15, 1910.

Wetmore, W. O., acting asst.-surgeon, granted 11 days' extension of leave on account of sickness from March 25, 1910.

Board of medical officers convened to meet at the Marine Hospital, Baltimore, for a physical examination of a gunner of the Revenue Cutter Service. Detail for the board: Surgeon W. P. McIntosh, chairman; Assistant Surgeon D. C. Turnipseed, recorder.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Regular; Little Rock, May 10-11. Sec., Dr. F. F. Murphy, Brinkley.

FLORIDA: Eclectic; Tampa, May 2. Sec., Dr. Hiram J. Hampton, 1805 Florida Avenue.

GEORGIA: Regular; Augusta, May 2-3, Atlanta, May 4-7. Sec., Dr. I. H. Goss, 297 Hancock Avenue, Athens. Homeopathic: Atlanta, May 15. Sec., Dr. R. E. Hinman, 153 Whitehall Street.

LOUISIANA: Regular; New Orleans, May 19-20. Sec., Dr. Felix A. Larue, 211 Camp Street. Homeopathic; New Orleans, May 2. Sec., Dr. Gayle Aiken, 1102 St. Charles Avenue.

MASSACHUSETTS: State House, Boston, May 10-12. Sec., Dr. E. B. Harvey, Room 159, State House.

MISSISSIPPI: State Capitol, Jackson, May 10. Sec., Dr. S. H. McLean, Jackson.

NEBRASKA: State House, Lincoln, May 11-12. Sec., Dr. E. Arthur Carr.

NEVADA: Carson City, May 2. Sec., Dr. S. L. Lee.

NEW YORK: Albany, May 24-27. Chief of Examinations Division, Mr. Charles F. Wheelock, Albany.

TENNESSEE: Memphis, Nashville and Knoxville, May 3-4. Sec., Dr. C. A. Abernathy, Pulaski.

Alabama January Report

Dr. W. H. Sanders, chairman of Alabama State Board of Medical Examiners, reports the written examination held at Montgomery, Jan. 11-14, 1910. The number of subjects examined in was 10; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 42, of whom 22 passed and 20 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
University of Alabama	(1908) 82.3; (1909) 77.8, 87.1, 82.4	
Birmingham Medical College	(1908) 79.6; (1909) 75, 75, 75.1	
	76.5, 78.5, 82.8, 88.3.	
University of Georgia	(1905)	81.8
Tulane University of Louisiana	(1909)	75.6
Medical College of Ohio	(1908)	76.7
University of Pennsylvania	(1909)	89.3
Vanderbilt University	(1901) 80.4; (1909)	77.8
University of Tennessee	(1908) 78.3; (1909)	75.9
Chattanooga Medical College	(1908)	78
University of Virginia	(1909)	84.1
FAILED		
University of Alabama	(1908) 65.2; (1909)	69.7
Birmingham Medical College	(1909)	71.7
Atlanta College of Physicians and Surgeons	(1909) 68.5, 69.3	
Atlanta School of Med.	(1906) 67.3; (1907) 65.4; (1908) 54.4, 69.2	
University of Louisville	(1909)	69.4
University of the South	(1907) 59.7; (1908)	48.5
University of Nashville	(1908)	70.1
Chattanooga Med. Coll.	(1907) 52.3; (1908) 57.4; (1909)	70.2
University of Tennessee	(1908)	61.7
Knoxville Medical College	(1908)	48.4
Meharry Medical College	(1902) 70.6; (1908)	71.7

The following questions were asked:

CHEMISTRY

(Answer Eight, no more.)

1. What is the difference between analytic and synthetic methods in chemistry? Illustrate each. 2. Explain the reaction which occurs when the aqueous solutions of the two parts of a Schlitz powder are mixed. 3. Write the equations which show the reaction occurring when corrosive sublimate and potassium iodide in solution are brought together. 4. What is the essential element of all acids? Differentiate between hydracids and oxyacids? 5. Give a test for H_2SO_4 when an adulterant in vinegar. 6. Give the technical names of (a) aqua regia, (b) oil of vitriol, (c) green vitriol, and the formula of one of them. 7. What is the chemical composition of ordinary alum? 8. Give the chemical reaction of (a) tears, (b) bile, (c) blood, (d) saliva, (e) milk, and state what salt causes acidity of urine. 9. Give a test for ferrous salts. 10. Explain the difference between a sulphate and a sulphite. Give an example of each. 11. Give tests for albumin and sugar in urine. 12. Describe a chemical test for blood.

ANATOMY

(For Graduates of Less than Five Years' Standing)

1. Describe the upper third of the femur. 2. Give the class of joint, the articulation, and ligaments of the shoulder joint. 3. Trace blood from the heart by way of the subclavian artery to the circle of Willis, naming the arteries uniting to form the circle. 4. Name the muscles of the anterior chest, and give origin and insertion of the largest one of them. 5. Name the main superficial venous trunks of the upper arm, describing one of them. 6. Describe the gall-bladder and bile-ducts. 7. Describe the great sciatic nerve. 8. Describe the rectum.

(For Graduates of More than Five Years)

1. Name the bones of the lower extremity. 2. Name and locate the valves of the heart. 3. Describe in full the sartorious muscle. 4. Locate the spleen and describe its gross anatomy. 5. Describe

in full the pulmonary veins. 6. Describe the contents in Scarpa's triangle and give their relations. 7. Name the lobes and ventricles of the brain. 8. Name the ligaments supporting the uterus and describe its blood supply.

PHYSIOLOGY

1. Explain the functions of the spinal cord. 2. What are the functions of the trifacial or fifth pair of cranial nerves? 3. What is meant by cell action? Give examples. 4. What are the supposed functions of the spleen? 5. What are the supposed functions of the thyroid gland? What symptoms sometimes follow its removal? 6. Explain the glycogenic function of the liver. 7. How is the equilibrium of the circulation of the blood maintained in the body? 8. What are the functions of the skin?

ETIOLOGY, PATHOLOGY, SYMPTOMATOLOGY, AND DIAGNOSIS OF DISEASES

1. Give the etiology of cirrhosis of the liver. 2. Give the etiology of pyelitis. 3. Give the pathology of arterial sclerosis. 4. Give the symptoms and diagnosis of hookworm disease. 5. Give the differential diagnosis between pericarditis and acute pleurisy. 6. Give the pathology of cerebrospinal meningitis. 7. Give the etiology of erysipelas. 8. Give the pathology of pneumonia.

OBSTETRICS AND OBSTETRIC OPERATIONS

1. What is meant by the inclined planes of the pelvis? 2. What are the forces by which the child is expelled? 3. Give operation for adherent placenta. 4. Give mechanism of left occipito-posterior position. 5. How would you manage a shoulder presentation? 6. Give causes and treatment of asphyxia in a new-born child. 7. How would you apply forceps at the inferior strait when the occiput has rotated to the pubic symphysis? 8. Give the degrees of perineal laceration and management of each.

GYNECOLOGY

1. Give causes and treatment of hemorrhage of the uterus. 2. Give the cause and treatment of amenorrhea. 3. Define ectopic pregnancy and give varieties. 4. Give differential diagnosis between fluid and solid neoplasms in the abdominal cavity. 5. Under what conditions and why would you prefer vaginal to abdominal hysterectomy? 6. Give symptoms of fibroid tumors of the uterus. 7. Give etiology of retro-displacement of the uterus. 8. Describe the technic of a gynecologic examination.

SURGERY

1. Give general rules for the treatment of wounds. 2. Give symptoms and treatment of traumatic spreading gangrene. 3. Give general rules for the treatment of tubercular abscesses. 4. Give differential diagnosis between chancre and chancroid. 5. Give treatment of a compound, comminuted fracture of the femur. 6. Give symptoms and treatment of subcoracoid dislocation of head of humerus. 7. Give symptoms and treatment of stone in the kidney. 8. Give treatment of penetrating gunshot wound of the abdomen.

PHYSICAL DIAGNOSIS

1. In what pathological conditions of the lungs is moderate dulness found; in what is absolute dulness found? 2. Give differential diagnosis between acute bronchitis and lobar pneumonia. 3. What are the principal points of difference between pleuritic friction sounds and bronchial rales? 4. Give the diagnostic signs of aortic aneurism. 5. What are the conditions most favorable for the production of metallic tinkle? 6. Give the differential diagnosis between endocarditis and pericarditis. 7. Give the diagnostic symptoms of emphysema of the lungs. 8. Differentiate between aortic stenosis and mitral insufficiency.

EYE, EAR, NOSE AND THROAT

1. Give symptoms and management of acute catarrhal conjunctivitis. 2. Give the symptoms, dangers, and management of gonorrheal ophthalmia in the adult and in the new-born. 3. Give the management of ulcer of the cornea. 4. In what part of the ear does cerumen sometimes become impacted, and how diagnosed and treated? 5. What is the seat of acute suppurative otitis media, and what the symptoms, dangers, and management? 6. In the absence of the special instrument for the purpose how would you arrest an alarming hemorrhage from the nose? 7. What is the most conclusive symptom of diphtheria and how ascertained? What is the most generally accepted treatment? Give in detail the method of administering the treatment, and the dose. 8. Name three instances in which intubation of the larynx would be indicated. Name three in which laryngotomy or laryngo-tracheotomy would be required, and describe the operation.

HYGIENE AND MEDICAL JURISPRUDENCE

1. What is the period of incubation of smallpox? of measles? Give the differential diagnosis between these two diseases. 2. What is immunity? What susceptibility?

3. How is typhoid fever disseminated? Give the hygienic management of a case. 4. Describe briefly the proper location and construction of a school building. 5. Define malpractice.

6. What are illusions? delusions? 7. Give the differential diagnosis between strychnin poisoning and tetanic convulsions. 8. What are the symptoms of acute poisoning from coal tar derivatives?

Arizona January Report

Dr. Aneil Martin, secretary of the Arizona Board of Medical Examiners, reports the written examination held at Phoenix, Jan. 3-4, 1910. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 5, of whom 3 passed and 2 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Hahnemann Medical College and Hospital, Chicago (1906)	76.5; (1907)	75
University Medical College, Kansas City	(1905)	81
FAILED		
University of Louisville	(1909)	68.6, 73.3

Marriages

AARON BRAV, M.D., to Miss Sophia Pollock, both of Philadelphia, April 5.

JOHN PARR, M.D., Methuen, Mass., to Miss Katherine Smith, of Boston, April 5.

OTTO SCHMIDT, M.D., Bethany, Mo., to Miss Dora Mink, of St. Louis, Mo., April 13.

ROBERT STEVENS PAGE, M.D., Bel Air, Md., to Miss Grace Rogers Street, at Bel Air, April 6.

JAMES T. JARRETT, M.D., Portsmouth, Va., to Miss Anna Andrews, of Roanoke, Va., March 31.

FRANCIS DE SALES DUBE, M.D., Amasa, Mich., to Miss Estella Isabell Derse, of Milwaukee, recently.

WALTER S. LAWRENCE, M.D., to Miss Merle Mauldin, both of Memphis, Tenn., at Monroe, La., April 5.

JOSEPH LONGWORTH NICHOLS, M.D., New York, to Miss May Morgan, at Saranac Lake, N. Y., April 5.

SAMUEL HENRY HAIRSTON, M.D., to Miss Nellie Vaughn Johnson, both of Meridian, Miss., March 16.

EDWIN M. HOWE, M.D., Petersburg, N. D., to Miss Emma Christine Thorson, of Sisseton, S. D., April 7.

EDGAR HAROLD WILLARD, M.D., Mount Pleasant, Md., to Miss Mary Louise Gittings, at Knoxville, Md., April 2.

Deaths

Andrew Heermance Smith, M.D. College of Physicians and Surgeons, New York City, 1858; a member of the Medical Society of the State of New York; president of the New York Academy of Medicine in 1903 and 1904; assistant surgeon Forty-third New York Volunteer Infantry during the Civil War, and assistant surgeon in the Army until 1867; a member of the American Climatological Association; physician to the Presbyterian, St. Luke's, St. Mark's and the Woman's Hospital; and since 1895, vice-president of the New York Post-Graduate Medical School and Hospital; died at his home in New York City, April 8, from arteriosclerosis and myocarditis, aged 72. At a special meeting of the Board of Directors of the New York Post-Graduate Medical School and Hospital, April 11, resolutions of affection and esteem were unanimously adopted.

Robert Breckenridge Christian, M.D. University of Virginia, Charlottesville, 1870; a member of the American Medical Association; a charter member of the Arkansas Medical Society; ex-president of the Pulaski County Medical Society, a member of the International Association of Railway Surgeons; secretary of the State Board of Health from 1893 to 1905; from 1898 to 1901, physician to the State School for the Blind; physician to the Arkansas Confederate Home; local surgeon at Little Rock for the Missouri Pacific Railroad from 1882 to 1889; physician in charge of the Pulaski County Hospital in 1891 and 1892, and surgeon of the Little Rock Street Railway and Electric Company from 1892 to 1897; died at his home in Little Rock, April 8, aged 60.

Anson Luman Clark, M.D. Eclectic Medical Institute, Cincinnati, 1861; formerly president of the National Eclectic Medical Association; one of the founders and for 35 years president of, and emeritus professor of obstetrics in Bennett Medical College, Chicago; gynecologist to Bennett Hospital; attending physician and surgeon to Sherman Hospital, Elgin, Ill.; local surgeon to the Chicago, Milwaukee and St. Paul Railway; for 14 years a member and treasurer of the State Board of Health; a member of the Twenty-seventh General Assembly; a member and for five years president of the Board of Education of Elgin; assistant surgeon of the One Hundred and Twenty-seventh Illinois Volunteer Infantry throughout the Civil War; one of the most prominent and esteemed eclectic practitioners of the west; died at his home in Elgin, April 11, from uremia, aged 73.

Edward Champe Carter, M.D. University of Virginia, Charlottesville, 1880; a member of the American Medical Association, Medical Society of the Philippine Islands, Manila Medical Society, and Association of Military Surgeons of the United States; Lieutenant Colonel in the Medical Corps, U. S. Army; chief surgeon at Fort Sheridan, Ill.; formerly instructor in the care of troops and diseases of the chest and sanitation in the Cavalry and Infantry School, Fort Leavenworth, Kan.;

formerly health commissioner of Manila, and a member of Opium Commission; died in the Army and Navy General Hospital, Hot Springs, Ark., April 14, from pneumonia, aged 55.

Richard Gray Herron, M.D. Western Pennsylvania Medical College, Pittsburg, 1889; of Pittsburg; a member of the American Medical Association; chief surgeon of the Pennsylvania Railroad Lines East, and for twenty years surgeon to the company; for several years a member of the staff of the West Penn Hospital, and since 1900 a member of the surgical staff of the Allegheny Hospital; died in that institution, April 9, from dilatation of the heart, aged 44.

Charles B. Mallery, M.D. Albany (N. Y.) Medical College, 1886; a member of the American Medical Association; president of the Aberdeen (S. D.) District Medical Society in 1903, and of the South Dakota State Medical Association in 1905; secretary of the local board of pension examining surgeons; a member of the board of health of Aberdeen; died in St. Luke's Hospital in that city, April 3, from diphtheritic endocarditis, aged 45.

James R. Kewley, M.D. Chicago Medical College, 1876; of Chicago; a member of the American Medical Association and of the Chicago Medical Examiners' Association; oculist and aurist to the People's Hospital; a member of the staff of Mercy Hospital for several years; an Odd Fellow of high rank; died in Eustis, Fla., April 14, from myocarditis, aged 56.

Frank M. Sawyer, M.D. Bennett Medical College, Chicago, 1878; College of Physicians and Surgeons, Chicago, 1884; a member of the American Medical Association; secretary of the board of health of South Bend, Ind., from 1888 to 1890; member of the board of directors of Epworth Hospital; died at his home, April 9, from cerebral hemorrhage, aged 59.

George Louis Horn, M.D. University of Pennsylvania, Philadelphia, 1868; for twenty years an employee of the Baltimore postoffice and superintendent of the money order division; formerly a member of the school board and city council of Baltimore; died at his home in Walbrook, Baltimore, April 8, from heart disease, aged 62.

Samuel Pierpont Ladd, M.D. New York University, New York City, 1879; who was about to be arrested on the charge of having performed a criminal operation, died suddenly in his office in Moosup, Conn., April 6, from the effects of cyanid of potassium, believed to have been self-administered with suicidal intent, aged 61.

John R. King, M.D. Bellevue Hospital Medical College, 1867; a member of the Ohio State Medical Association and Cincinnati Academy of Medicine; for 33 years local surgeon of the Pennsylvania System; and for 43 years a practitioner of Cincinnati; died at his home in Hyde Park, April 10, from heart disease, aged 65.

Thomas Neil McLean, M.D. Yale University, New Haven, 1871; a member of the American Medical Association; one of the founders of and consulting physician to the Elizabeth (N. J.) General Hospital; died in Johns Hopkins Hospital, Baltimore, April 8, from pneumonia, following influenza, aged 67.

Charles Fay Amos, M.D. University of the South, Sewanee, Tenn., 1895; a member of the American Medical Association; surgeon for the Baltimore and Ohio Railroad at various points in West Virginia until 1909, when he moved to Ohio, died at his home in Youngstown, March 21, from pneumonia, aged 39.

Alfred Fowler Rudd, M.D. American Medical College, Eclectic, Cincinnati, 1857; died at his home in Jefferson City, Mont., March 13, from the effects of an incised wound of the throat, supposed to have been self-inflicted with suicidal intent, while despondent on account of the recent death of his wife, aged 77.

Arthur Alvin Holmes, M.D. Harvard Medical School, 1865; a member of the Connecticut State Medical Society; a surgeon in the Federal Service during the Civil War; consulting physician to Bridgeport Hospital; died at his home in Bridgeport, March 24, from pneumonia, following influenza, aged 71.

Charles Schumacher, M.D. University of Göttingen, Germany, 1866; is reported to have died at his ranch twenty miles north of Pasco, Wash., March 30, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent, aged 71.

Clyde Edmund Botkin, M.D. Purdue University, Indianapolis, 1907; formerly a member of the American Medical Association; a member of the Indiana State Medical Association; died at his home in Parker, April 7, from pneumonia, aged 27.

Maurice F. Linquist, M.D. Eclectic Medical College of the City of New York, 1869; a veteran of the Mexican War and a surgeon of volunteers during the Civil War; died at his home in New Haven, April 3, from pneumonia, aged 83.

David P. Lagrone, M.D. Medical College of the State of South Carolina, Charleston, 1861; surgeon in the Confederate Service during the Civil War; died at his home in Johnston, S. C., April 2, from cerebral hemorrhage, aged 77.

John Field Grinstead, M.D. St. Louis College of Physicians and Surgeons, 1889; surgeon for the Wabash Railroad at Keytesville, Mo.; died suddenly at the home of his sister in St. Louis, April 6, from heart disease, aged 45.

Rose Morgan, M.D. Woman's Medical College of Pennsylvania, Philadelphia, 1895; a member of the Medical Society of the State of Pennsylvania; died at her home in Williamsport, March 29, from carcinoma of the intestine.

William H. Elliott, M.D. American Medical College, Eclectic, St. Louis, 1878; who conducted a sanitarium for many years at Havana, Ill.; died at his home in Bardolph, Ill., March 24, from carcinoma of the rectum, aged 74.

Haven Palmer, M.D. Medical School of Maine, Brunswick, 1871; a member of the American Medical Association; for 27 years a practitioner of Plymouth, N. H.; died at his home April 8, from nephritis, aged 66.

Charles Bartlett Hammond, M.D. Harvard Medical School, 1880; a member of the American Medical Association, and New Hampshire Surgical Club; died at his home in Nashua, April 8, from uremia, aged 56.

John Milton Hawks, M.D. Physio Medical College, Cincinnati, 1847; a veteran of the Civil War; and surgeon of the Thirty-third Colored Infantry; died at his home in Hawk's Park, Fla., April 2, aged 73.

Arthur Sylvester McNatt (registration, Eighth Judicial District Board, Texas, 1901); a member of the Hunt County Medical Association; died at his home in Campbell, February 5, from pneumonia, aged 57.

Mary Freeman Coil, M.D. Cooper Medical College, San Francisco, 1882; a member of the Medical Society of the State of California; died at her home in Woodland, Aug. 19, 1909, from arteriosclerosis, aged 58.

Jason Milburn Randall (license, years of practice, Iowa, 1886); of Birmingham; a veteran of the Civil War; died at the home of his daughter in Waterloo, April 3, from organic heart disease, aged 67.

Crawford McWilliams, M.D. College of Physicians and Surgeons, Chicago, 1890; a member of the Iowa State Medical Society; died at his home in Ames, April 2, from pleuropneumonia, aged 44.

John Lafayette Warren, M.D. University of Pennsylvania, Philadelphia, 1856; well-known as a naturalist and sportsman; died at his home in West Chester, Pa., April 8, from pneumonia, aged 72.

Lawrence A. Highland, M.D. University of Buffalo, 1903; of Buffalo, N. Y.; died in the Contagious Diseases Hospital in that city, April 2, from scarlet fever contracted while attending a patient, aged 30.

William A. Davis, M.D. Louisville Medical College, 1901; of Collinsville, Miss.; who was shot in a street duel in Decmer, Miss., March 28, died twenty hours later at Oktibbeha, Kemper county, aged 34.

Return J. Pope, M.D. Washington University, St. Louis, 1871; a member of the State Medical Association of Texas; died suddenly at his home in Sweetwater, April 6, from heart disease, aged 65.

Samuel E. Sanderson, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1876; a pioneer practitioner of Minnesota, Minn.; died in Madison, Wis., February 5, from nephritis, aged 59.

Clarence Duane Heflin, M.D. Keokuk, Iowa, Medical College, 1895; formerly of St. Joseph, Mo.; died in St. Francis Hospital, Kewanee, Ill., March 29, from pernicious anemia, aged 41.

Arthur James Darrah, M.D. University of Vermont, Burlington, 1867; a member of the Vermont State Medical Society; died at his home in Enosburg Falls, April 3, from influenza, aged 65.

Clarence Godfrey Vary, M.D. Jefferson Medical College, 1898; a member of the Michigan State Medical Society; died at his home in Battle Creek, April 7, from nephritis, aged 36.

Frederick E. Green (Registration, Thirteenth Judicial District Board, Texas, 1898); died in his apartment in Hutchins, April 9, from the effects of an overdose of chloroform.

Thomas G. McClellan, M.D. Memphis, 185—; of Dallas, Texas; for several years treasurer of Fayette county; died at the home of his grandson, Aug. 18, 1909, aged 84.

William T. Coffman, M.D. Central Medical College, of St. Joseph, Mo., 1902; died at his home in Unadilla, Neb., April 23, 1909, from intestinal obstruction, aged 45.

Joel Thomas Bell, M.D. University of Nashville, Tenn., 1858; died at the home of his daughter in Guthrie, Ky., March 30, from pneumonia following influenza, aged 78.

Henry Clay Cress, M.D. Jenner Medical College, Chicago, 1901; of Chicago; died in Provident Hospital in that city, Nov. 15, 1909, from pneumonia, aged 34.

John B. Crowley, M.D. Philadelphia College of Medicine and Surgery, 1858; for forty-five years a practitioner of Sullivan, Ind.; died at his home, April 7, aged 84.

George Francis Haynes, M.D. Eclectic Medical Institute, Cincinnati, 1872; died at his home in Chicago, January 2, from cerebral hemorrhage, aged 73.

John H. Elrick, M.D. Jefferson Medical College, Philadelphia, 1858; died at his home in Harrisville, Pa., January 24, from capillary bronchitis, aged 80.

Frederick William Scheid, M.D. Pulte Medical College, Cincinnati, 1881; died suddenly at his home in Toledo, April 7, from heart disease, aged 50.

Joseph P. McNutt, M.D. Medical College of Virginia, Richmond, 1870; died at his home in Princeton, W. Va., April 5, from acute gastritis.

James B. Cowan, M.D. University of Nashville, Tenn., 1878; died at his home in Lebanon, Tenn., Oct. 3, 1909, from angina pectoris, aged 52.

Robert E. McLelland (state certificate, Texas, 1904); died in his room in Houston, Texas, March 19, from tuberculosis, aged 45.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

THE PUBLIC PRESS AND THE PUBLIC SCHOOLS AS FACTORS IN THE ANTITUBERCULOSIS EDUCATIONAL CAMPAIGN

By M. T. Field, M.D.
SALEM, MASS.

So much has been written and said concerning public instruction on tuberculosis that there seems to be little excuse for any further literature on the subject. Many of the antituberculosis educational methods adopted by boards of health and special societies, are excellent and far-reaching in the good results produced. On the other hand, some of them, while perhaps ingenious, are not very effective, either because they influence only a relatively small number of people or because they influence them only in an unimpressive manner.

Two agencies that are within the reach of all health authorities have not been employed as frequently as they should—the public press and the public schools. These two agencies present almost unlimited opportunities for distributing antituberculosis information among the people. The "dosage" can be made as large or as small as is desired, and can be repeated as often as necessary. In this way, practically all the people can be reached in a very short time, with only a small expenditure of money.

The purpose of this paper is to describe a plan adopted by the Salem Board of Health during the year 1909 which employed, in a thorough manner, the public press and the public schools, in its antituberculosis educational campaign. Early in the year, illustrated circulars were printed and distributed throughout the city, in the factories, stores, etc. These folders touched on important features of the disease and called attention to the fact that antituberculosis articles were to be published daily in the local papers by the board of health. Every one was advised to read them. These articles were printed as ordinary news in a prominent part of the paper and in the same place each day, and were inserted with ordinary large type headings. They were made as readable as possible, considerable attention being paid to conditions as they existed in Salem. Much stress was laid on the importance of early treatment, and the great care that should be used to avoid infection, particularly when there was more or less exposure to the disease in the same household. The articles continued every day for nearly a month. They were then followed by a "question box department," which the board of health opened in the papers. In these columns suitable questions were answered daily. Many of these questions touched on features that were difficult to deal with in the regular articles. Judging from the various encouraging reports that came to us from time to time, we are firmly convinced that the newspaper publicity was productive of much good, and there was no evidence of any phthisiophobia resulting from it.

Our attention was next directed to public school instruction. The board of health prepared a well-illustrated pamphlet of about 75 pages entitled, "The Story of Tuberculosis, Man's Greatest Enemy," expressly for the use of school children. We tried to make this as readable as possible, at the same time treating of all the essential features of tuberculosis. Every effort was made not to arouse undue morbidity. Permission was obtained from the school board and church authorities to introduce this publication as a text-book, into the seventh, eighth and ninth grades of the grammar schools and into the high and parochial schools; much interest was manifested by both teachers and pupils.

The text-books were distributed with the understanding that at the end of the course of study, each child would be required to answer, in writing, a set of questions submitted by the board of health. This was done in order to promote more diligent study and also to enable us to judge how well the children grasped the subject. Children were also advised to take the pamphlets home and encourage other members of the household to read them.

The method of teaching adopted in the schools was as follows: In the grammar grades, this study was taken up every day during the reading hour. The portion of the book to be read was designated by the "reading teachers," who explained the things that were difficult to understand and encouraged and assisted the pupils in many ways. This continued for about three weeks. At the end of this time, each child was required to answer the board of health questions in writing, and was urged to use his own words as much as possible. The pupils of some of the schools were required to answer the questions in writing, first at home in conjunction with other members of the family and after this, a memory examination was held in school, the pupils answering ten questions each day for three consecutive days. In the high school the study was introduced into the literature class. The pastor in charge of one of the parochial schools gave several cash prizes for the best papers written by the children of his school.

The following is the list of examination questions answered in writing by over 3,000 school children. (The population of Salem is 39,000.)

1. What is tuberculosis?
2. Describe briefly its cause.
3. What is consumption?
4. What are the three common ways for the germs of tuberculosis to enter the body?
5. Is tuberculosis inherited?
6. What is meant by "predisposition?"
7. Is it possible to prevent tuberculosis?
8. How may this be done?
9. Why is it important to take care of all sputum, especially consumptives' sputum?
10. Describe the proper methods of disposal of consumptives' sputum.
11. What is the significance of "open" and "closed" tuberculosis?
12. Why is consumption called a house disease?
13. How can the home be made sanitary?
14. What are the evil results of house dust, dampness and improper ventilation?
15. Why are bare floors and rugs more hygienic than fixed carpets?
16. What is the value of regulated bathing?
17. Why do drunkenness and other bad habits frequently lead to tuberculosis?
18. Describe briefly the essential features in the treatment of tuberculosis.
19. Why should a love of outdoor life be cultivated?
20. Are advertised "cures" of any value?
21. How curable is tuberculosis?
22. Why is it desirable to obtain treatment early?
23. Why should very sick patients not be advised to seek a change of climate?

24. What are some of the advantages and disadvantages of home treatment?
25. How can it be made safe to live in the same household with a consumptive patient?
26. What is the value of soap as a disinfectant?
27. Why is sanitarium treatment so successful?
28. What useful purpose do day and night camps and open air schools serve?
29. Is it possible to prevent the occurrence of one case of consumption after another in the same family?
30. How can this be prevented?

These questions were answered by pupils from 11 to 18 years of age. It was not our intention at first to include the younger children, but we were urged to do so by some of the teachers. The results proved their contention that the subject was within the understanding of children even 11 or 12 years of age.

The majority of the papers were extremely good. Any one given the opportunity to glance over them would at once be convinced that the subject matter was well understood. Some of these papers are to be published in the local press. It is the intention of the board of health to have the teaching of this subject, followed by examinations, repeated once a year.

As a result of this year's work, we feel justified in drawing the following conclusions:

1. Tuberculosis as a study can be introduced into the public schools without conflicting in any way with the other school work and without creating morbidness among the pupils.

2. Even young children 11 or 12 years of age can, with proper assistance, master the essential features of the subject.

3. A very powerful educational influence can be exerted by children thus instructed in their own houses and elsewhere.

4. The method of teaching which compels the pupil to study the subject carefully in order to answer correctly the examination questions is, in our opinion, better than any other plan we know of—such as occasional lectures by physicians.

5. If this method of antituberculosis instruction could be adopted in every city and town throughout the country, year after year, it would mean that every future man and woman—every father and mother educated in this country, would have received a good antituberculosis education which almost unconsciously would lead to a more sanitary way of living, resulting in benefit in many ways, and protecting not alone against tuberculosis but against other diseases as well.

We believe that it would be an excellent plan for state medical societies or the state boards of health to take charge of the antituberculosis education of school children, sending out examination questions from time to time in this subject, just as the Board of Regents in New York state does now on other subjects. In this way, general interest would be aroused that could not possibly be produced in any other way and much benefit would result therefrom.

A National Department of Health

From all reports it is evident that there is a general and wide-spread approval on the part of the medical profession of the country for the measure to create a national Department of Health. Resolutions have already been passed favoring a department by the following county societies: Adams county, Ill.; Lee county, Ill.; Tazewell county, Ill.; Mercer county, Ky.; Merrimack county, N. H.; New Orleans Parish, La.; Sebastian county, Ark.; Montgomery county, Ark.; Pulaski county, Ill.; Daviess county, Mo.; Washington county, Tenn.; Washington county, Iowa; Washington county, Ark.; Fourth District Society, S. D.; Madison county, Ala.; Alameda county, Cal. The Commercial Club of North Platte, Neb.; the Florida Press Association, and the Hobart, Okla., Chamber of Commerce have also taken action.

Editorial comments show that the movement has the endorsement of the public press. Extracts from a few of the editorials received follow:

The *Wilkes-Barre* (Pa.) *Record* says, April 11, "Congress has before it a bill providing for the consolidation of the various health agencies into a federal bureau. The movement has been endorsed by the national platforms of the two great parties and by President Taft. A dispatch from Washington states 'it is appreciated that there is little or no hope of action at this session.' It is impossible to see why there should be further delay. The proposition is not revolutionary. It merely provides that various agencies already established shall be brought under one management, in order that there may be a concerted and harmonious fight against disease so far as it lies in the power of the federal government to pursue that work. . . . Science has pointed out the way to the rescue. The public demand for it has been created. There is absolutely no reason why congress should longer defer the enactment of a measure advocated by the national and state medical associations, the party platforms, the President and the best thought of the nation."

The *St. Paul* (Minn.) *Pioneer-Press* says, "Senator Owen of Oklahoma in a speech supporting his bill to provide for a Department of Health . . . presented to the Senate some statistics that should make the people of the country think. . . . Even if the conditions are only a small part of what he says and if only a minor fraction of what he claims could be accomplished, a Department of Health would be worth while. Let us conserve lives and health of the people along with our other resources, for these are our greatest resource."

The *Chicago Examiner* says: "Senator Owen's bill, providing for the establishment of a national Department of Health, should speedily become a law. . . . If there be any subject of government that is essentially interstate and that requires uniform, nation-wide control it is disease. Microbes pay no attention to political divisions—they have no regard for state lines. . . . Disease germs are so furtive and insinuating that to deal with them effectively requires that they shall be attacked wherever and whenever found. A sanitary campaign in New York will often be the best possible protection for Illinois. . . . Senator Owen's bill has no shadow of despotism in it. By its terms all federal officials whose duties relate to 'the medical, surgical, biologic or sanitary service or any question relative thereto' (excepting the departments of the War and the Navy) are integrated in the proposed Department of Health. . . . A large corps of attentive and capable students and observers scattered throughout the country, and all coordinating their work in one intelligent system, cannot fail to accomplish much good. What the Weather Bureau is to storms the proposed department would be to disease—and something more. The bill ought to pass!"

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Ninth Month—Second Weekly Meeting

DISEASES OF NASAL SEPTUM

DEVIATIONS: Etiology, pathology, operative treatment.
PERFORATION OF NASAL SEPTUM: Etiology, treatment.
INJURIES OF NOSE: Pathology, diagnosis, treatment.

DISEASES OF THE ACCESSORY SINUSES OF THE NOSE

INFLAMMATION OF THE ANTRUM OF HIGHMORE: Etiology, diagnosis, treatment.
INFLAMMATION OF THE FRONTAL SINUS: Varieties, etiology, symptoms, treatment.
INFLAMMATION OF THE ETHMOID CELLS: Pathology, symptoms, treatment.
EMPYEMA OF THE SPHENOIDAL CELLS: Symptoms, treatment.

DISEASES OF THE NASOPHARYNX

POSTNASAL CATARRH: Adenoids. Hypertrophy of pharyngeal tonsil. Symptoms, treatment. Chronic bursitis.

DISEASES OF THE OROPHARYNX

ACUTE PHARYNGITIS: Diagnosis, treatment.
SIMPLE CHRONIC PHARYNGITIS: Etiology, diagnosis.
CHRONIC FOLLICULAR PHARYNGITIS: Symptoms, treatment.
ATROPHIC PHARYNGITIS.
ULCERATIVE PHARYNGITIS.
PHLEGMONOUS PHARYNGITIS.
RETROPHARYNGEAL ABSCESS.

Society Proceedings

COMING MEETINGS

Amer. Assn. of Genito-Urinary Surgeons, Washington, D. C., May 3-4.
Amer. Assn. of Pathologists and Bacteriologists, Washington, May 3-5.
American Climatological Association, Washington, D. C., May 3-5.
American Dermatological Association, Washington, D. C., May 3-5.
American Gynecological Society, Washington, D. C., May 3-5.
American Laryngological Association, Washington, D. C., May 3-5.
Am. Laryn., Rhin. and Otol. Society, Washington, D. C., April 28-30.
Amer. Medico-Psychological Association, Washington, D. C., May 3-5.
American Neurological Association, Washington, D. C., May 3-5.
American Ophthalmological Society, Washington, D. C., May 3-4.
American Orthopedic Association, Washington, D. C., May 3-5.
American Otological Society, Washington, D. C., May 3-5.
American Pediatric Society, Washington, D. C., May 3-5.
American Surgical Association, Washington, D. C., May 3-5.
American Therapeutic Society, Washington, D. C., May 5-7.
Association of American Physicians, Washington, D. C., May 3-5.
Conf. State and Prov. Bds. of Health, Washington, April 28-29.
Congress of Amer. Phys. and Surg., Washington, D. C., May 3-6.
Connecticut State Medical Society, New Haven, May 25-26.
District of Columbia, Medical Association of, Washington, April 26.
Illinois State Medical Society, Danville, May 17-19.
Iowa State Medical Society, Des Moines, May 20-21.
Kansas Medical Society, Topeka, May 4-6.
Louisiana State Medical Society, New Orleans, May 3-5.
Maryland, Med. and Chirurgical Faculty of, Baltimore, April 26-28.
Missouri State Medical Association, Hannibal, May 3-5.
Montana State Medical Assn., Hunter's Hot Springs, May 11.
National Association for Study of Epilepsy, Baltimore, May 7.
Nebraska State Medical Association, Lincoln, May 10-12.
New Hampshire Medical Society, Concord, May 12-13.
North Dakota State Medical Association, Grand Forks, May 10-11.
Ohio State Medical Association, Toledo, May 11-13.
Oklahoma State Medical Association, Tulsa, May 10-12.
Rhode Island Medical Society, Providence, May 31.
Texas, State Medical Association of, Dallas, May 10-12.

TENNESSEE STATE MEDICAL ASSOCIATION

Seventy-seventh Annual Meeting, held at Memphis, April 12-14, 1910

The President, DR. JERE L. CROOK, Jackson, in the Chair

Officers Elected

The following officers were elected: President, Dr. John A. Witherspoon, Nashville; vice-presidents, east Tennessee, Dr. J. J. Waller, Oliver Springs; middle Tennessee, Dr. Richard A. Batt, Nashville; west Tennessee, Dr. J. H. E. Rosamond, Memphis; secretary-editor, Dr. George H. Price, Nashville; treasurer, Dr. W. C. Bilbro, Murfreesboro.

Nashville was selected as the place for the next annual meeting, April 11 and 12, 1911.

Pellagra

DR. J. A. SEWELL, Rockwood, gave a history of this disease, and then discussed the symptomatology, the etiology, pathology, diagnosis and treatment. Regarding the treatment he said: To the present no specific remedy has been discovered and medication has little or no effect in the treatment of pellagra. The essential management consists in placing the patient in good hygienic surroundings, and improving the general health by giving good nourishing food and such tonics as may seem indicated. The various preparations of arsenic and iron are the remedies on which reliance has been placed and would sometimes seem to influence the disease favorably. Prophylaxis operating through the medium of the enforcement of the pure food law, the enactment of suitable prohibitory laws, regulating the sale and use of intoxicants, the rigid enforcement of good hygienic rules and regulations, together with compulsory education and the art of proper cooking being taught in our public schools, affords the only way to combat the malady successfully.

Hypertrophied Prostate

DR. L. E. BURCH, Nashville: The direct cause of prostatic hypertrophy is unknown. Sir Henry Thompson states that 33.33 per cent. of men beyond the age of 55 have enlarged prostate, but not more than 5 per cent. of these present symptoms. In the light of recent investigation, gonorrhea plays no part. Young claims that in his series of cases it was more common in married men, and states that he has never seen it in a Catholic priest. There are two varieties of prostatic hypertrophy. First, the glandular, which is by far the most common; second, the fibromuscular, which produces a smaller and a firmer growth. If the patient is seen early, palliative treatment is indicated, consisting of tonics, regulation of the secretions and excretions, regular habits, and dilatation of the prostatic urethra followed by injection of one of the silver salts. If this treatment fails and residual urine begins to accumulate, then the patient should be given the choice of a catheter life or operation. I am convinced that if the advantages and disadvantages of both are fairly stated the majority of patients will select operation. There are two routes for the removal of this gland, the perineal and suprapubic. If the tumor is low down and well-defined by rectal examination, the perineal route is the operation of choice. If the patient is stout and has a long prostatic urethra, or if the tumor is prominent in the bladder and is not palpable by the rectum, then suprapubic prostatectomy is indicated. Between these two extremes are the borderline cases that can be reached by either route depending on the choice of the operator.

Chronic Prostatitis

DR. GEORGE R. LIVERMORE, Memphis: Those who take too optimistic a view of chronic prostatitis have either had little experience or else have allowed their enthusiasm to get the better of their judgment, for it has been my experience that these cases are among the most difficult and trying that the genito-urinary specialist is called on to treat. Prostatic massage is the treatment *par excellence*. It should be done carefully and systematically, beginning with gentle massage, lasting only a minute, once or twice a week, and increasing in frequency in time and strength until given every other day. The bladder should be irrigated after the massage with some antiseptic solution; or a good plan is to fill the bladder moderately full with some antiseptic solution, massage the prostate, and then allow the patient to void the solution, thus carrying away the débris expressed by the prostate. After irrigating the bladder, instillations of stronger solutions may be made to the prostatic urethra.

Diagnosis and Treatment of Prostatic Obstruction

DR. BRANSFORD LEWIS, St. Louis: What is the evidence that enables us to determine definitely the points essential for the differential diagnosis of prostatic obstruction? First, hypertrophy: After the patient finishes the endeavor to urinate, in which the character of the stream is shown, insert the forefinger into the rectum and feel the prostate. Learn whether it is large, globular, hard, or soft, rugged, and nodular, or smooth and even. While rectal palpation does not always give absolute information on this point since the hypertrophy may tend rather toward the bladder cavity than toward the rectum, the information it gives is valuable in most cases and is not to be looked on lightly. Second, is there obstruction? Obstruction and the amount of obstruction are both determined by the simple maneuver of inserting a catheter following the voluntary urination and rectal palpation. The catheter draws off the urine that the patient has been unable to pass—the residual urine, which is a barometer of no mean value in estimating the seriousness of a given case of urinary obstruction. The amount varies from 1 or 2 to 42 ounces. It is more reliable than the patient's own impressions as to whether he empties his bladder or not.

(*To be continued*)

JOINT MEETING OF THE NORTH CENTRAL SECTION OF THE AMERICAN UROLOGICAL ASSOCIATION WITH THE CHICAGO UROLOGICAL SOCIETY

Meeting held in Chicago, March 24, 1910

DR. GUSTAV KOLISCHER, President of the Chicago Urological Society, in the Chair

Ought the General Practitioner to Treat Venereal Diseases?

DR. DANIEL S. GARDNER, Massillon, Ohio: Experience has taught me that no one has the necessary elements of qualification in this work who has not, (1) mastered a sufficient knowledge of microscopic technic to determine the presence of pathogenic organisms; (2) a sufficient diagnostic knowledge to determine the nature of physical lesions; (3) an equipment and the necessary technic for the diagnosis and treatment of these diseases; (4) a willingness to give his cases the personal time and attention they require. Rarely does the general practitioner outside the city even possess a microscope, and when he does he has ceased to retain his laboratory technic to a working degree. In the absence of

this, he must grope his way blindly for he is less fortunate than his city brother who can, if he chooses, have the benefits of a microscopic laboratory. Also, universities are at fault. They content themselves with a few didactic lectures each semester and to the discredit of American teaching, nowhere in the country can be found a place where organized clinical teaching of these subjects can be found. Hence, the comparatively small number of cases encountered in his practice precludes the possibility of the general practitioner having diagnostic skill or acquiring a technic in the use of the many instruments necessary to cope with these diseases. He has a few urethral sounds, selected without reference to scale but as to what would constitute the normal urethral caliber. Asepsis, antisepsis, sterilization, do not enter into the matter. If urethral chill follow the operation it is never attributed to the possible condition of the instrument. In the face of these facts, what right has the general practitioner to argue against the absolute specialism in the treatment of these diseases? While we all admit that the work has frequently fallen into unscrupulous hands and that quackery of a vicious sort has been reaping an unmerited reward, yet on what has that industry thrived, but the indifferent management of the primary cases at the hands of the general practitioner?

Whatever advance the practitioner may have made in the line of general medicine, I fail to see a corresponding progress in his mastery of the details of venereal diseases. I feel that this society should inaugurate a campaign of education.

DISCUSSION

DR. BRANSFORD LEWIS, St. Louis: In this country much work has been done along the line indicated by Dr. Gardner and there are six or seven different local organizations in such cities as New York, Philadelphia, Detroit and Chicago; and there is a movement on foot to form a national organization along these lines during the session of the American Medical Association at St. Louis in June. Every one interested in the subject ought to contribute his quota to the formation of such an organization with a view to developing some sentiment in different cities of the country. If men are going to undertake urological work they should see to it that their patients get the proper service and not a slurring over in the matter of diagnosis which occurs most of the time. I recall the case of a farmer who consulted a number of practitioners with reference to excessive frequency of urination. All gave medicines for the relief of his trouble without avail. This man urinated from twenty to thirty times a day and as many times during the night. His life was one of misery. A careful examination disclosed a large stone in the bladder which could have been removed by perhaps any of the men whom he had consulted if they had taken the pains to make a thorough examination and diagnosed the case carefully. There was no difficulty in removing the stone. It is an obloquy on our profession that such a fact should be stated. It is a shame that any man should be allowed to go through such an experience.

DR. FREDERICK W. ROBBINS, Detroit: The position taken by Dr. Gardner is similar to that taken by men in other branches of medical work. There are many men whose specialty is ophthalmology, who insist that the only thing a general practitioner has to do is to make a diagnosis of some disease of the eye and send the patient to an ophthalmologist. On the other hand a special effort is being put forth in many states requiring the medical student before he is licensed to practice medicine to pass an examination on the simple forms of ophthalmologic work. Many ophthalmologists have taken the stand that the great bulk of work in ophthalmology should not be done by them, but by the general practitioner who is educated in the treatment of the simple diseases of the eye. If we, as an organization, take the position of Dr. Gardner, if we were all simply and only urologists, then we could speak in this way as regards the general practitioners, but even then the question should revert to the teaching of these things in our medical schools. The practitioner ought to know enough to tell whether he can handle a case or not, and if he is not competent to treat it the patient should be sent to some one who is competent to do so.

DR. L. W. BREMERMAN, Chicago: The general practitioner has too much to attend to; he wants to make all the money he can out of his practice and considers genitourinary diseases his legitimate prey. So long as it is permissible for members of county medical societies to guarantee a cure of gonorrhea for fifteen dollars, just so long are we going to have gonorrhea if there is not careful inspection afterward. The promiscuous treatment of gonorrhea by those who are not practitioners of medicine should be condemned. The laity to-day have as good a conception of what argyrol, protargol and similar preparations are used for as the practitioner himself, and the druggist facilitates that knowledge by prescribing for the treatment of gonorrhea. One man told me it cost eighty-five dollars in prescriptions for the treatment of his case of gonorrhea before the discharge had stopped and then he was far from cured. I think it is our duty to volunteer our services in giving lectures or talks before sociologic societies on the dangers of venereal diseases.

DR. HENRY J. SCHERCK, St. Louis: I cannot agree with Dr. Gardner that the general practitioner should not treat venereal diseases. It has been my experience and observation that the number of competent men in every city engaged in genitourinary work is proportionately much smaller than in any other specialty in medicine. No matter how much we may decry the efforts of the general practitioner, he will attend most of the cases before we see them. I seldom see a fresh or new genitourinary case. In fully 90 per cent. of the patients who come to me the disease has reached an advanced stage. The slogan should be education; not so much of the public, but of the general practitioner in methods of accurate diagnosis and in the treatment of these conditions so that he does not produce more harm than existed in the first instance. General education of the public must come through the instrumentality of such organizations as have been mentioned. I do not think much can be accomplished by legislation. Popular, systematic education of the growing youth and of the man about town is the solution of this question.

DR. D. S. GARDNER: For years I have read papers on these subjects in my local societies and none of my hearers has replied to my remarks concerning more accurate diagnoses and better treatment of these cases. They simply listened and said nothing. The education of such men to my mind is out of the question.

Bladder Symptoms and Extra-Bladder Pathology

DR. FREDERICK W. ROBBINS, Detroit, reported three cases, all in females, and having to do with inflammatory conditions at the vesicourethral junction. The cause of the inflammatory area seems different in each of the three cases. In each case the dysuria and pollakiuria were due to inflammation of the urethra at about the urethrocystic junction or where the vesical sphincter may be thrown into spasm as a result of the inflamed mucosa beneath it.

DISCUSSION

DR. HENRY JACOBSON, St. Louis, Missouri: Our knowledge should be broad as to the different reflex causes of trouble. Tabes will cause urinary symptoms. For instance, in beginning tabes we have to make a diagnosis from the exaggerated reflexes, the difference in the pupils and the urinary symptoms, taken together with the other symptoms, would indicate our line of treatment. Adenoids sometimes cause increased frequency of urination, and in children adherent prepuce will cause urinary symptoms. A fibroid tumor of the uterus will cause frequent micturition, and prostatic inflammation of all kinds causes urinary symptoms; frequency of urination is also observed in hysterical women. All these things indicate that we should have a good working knowledge of the human system, and genitourinary specialists should keep in touch with the general conditions of the body in order to make accurate diagnoses and to treat his patients successfully.

DR. HENRY J. SCHERCK, St. Louis: I wish to report two cases. The first was one of hysterical retention of urine in which a neurologist could not by any method he could advise,

get the woman to empty the bladder voluntarily, so that it was necessary to catheterize her at intervals. Being familiar with the literature and knowing that the treatment of these cases is generally unsatisfactory, as there were certain areas of the skin which were perfectly anesthetic, it occurred to me it might have something to do with the condition of the bladder. Through the cystoscope I was enabled to detect some areas of anesthesia in different portions of the bladder, and marked pressure with the cystoscope by means of a catheter, through which I put a little wire, failed to elicit any symptoms or any sensation of pain, while other portions of the bladder were apparently normal in sensation. I mention this as showing the possibility of areas of anesthesia existing in the bladder just as well as on the outer surface of the body in these cases. A man was brought to the hospital in a bad condition. I was sent for and did a suprapubic cystotomy under local anesthesia. The bladder was distended above the umbilicus. The intern diagnosed retention of urine due to impassable stricture. The man's pulse was very rapid. Two quarts of a mixture of blood and urine came from the bladder. I introduced my finger into the bladder and felt an impacted stone in the ureteral opening, brought it down and removed it.

DR. GUSTAV KOLISCHER, Chicago: Urethroceles are not uncommon in women. One symptom which will always lead to the suspicion that urethrocele exists is that after these patients have urinated there is a dribbling of urine and they learn to evacuate the urine by inserting the finger into the vagina and squeezing the urethrocele. Urethrocele is not only the origin of frequent urination, but finally leads to serious disturbances because the urine is retained. The wall of the urethrocele becomes infected and this leads to the formation of deep abscesses in the vesico-vaginal septum. The rational therapy of urethrocele is to excise it, that is, insert a sound as a guide and excise the whole sac of the urethrocele and unite the edges.

DR. F. W. ROBBINS: I had always supposed the bladder wall was entirely anesthetic. In touching any portion of the bladder I have never been able to elicit pain or an uncomfortable feeling from the patient. Inability to urinate may be considered due to hysteria, but if we pass the urethroscope into the bladder and withdraw it we will find granular areas of the vesical sphincter which gives us a clearer reason for the condition than to go ahead on the basis of the trouble being hysterical or reflex. If we find granular areas in the urethral wall, and if we stretch it by passing a large sound and apply nitrate of silver, these areas may disappear like magic.

Possibly a Way for Cure of Seminal Vesicle Infection

DR. CHARLES E. BARNETT, Fort Wayne, Ind.: That the vesicles become infected frequently goes without saying; so the burden of solving the problem of relief from vesicular infection is paramount in the urologists' mind. I have advocated for several years the autogenous vaccine possibility, and have contended that were we able to find culture media that would grow the gonococcus as luxuriantly as can man himself, at least the infection might be eradicated even if the pathology that was concomitant with the infection would remain pathologic. If pus tubes in the female sterilize themselves after a time, why should not infected vesicles and prostate in men do so also. We know, however, that even after many years pus evacuated from either vesicle or prostate may show the gonococcus and when it is given good media for growth, as for instance, the uterus or tubes, it will reproduce an organism that is virulent. With this condition present in such a large percentage of men it makes it a danger for all women that is appalling to contemplate. So it behooves the urologist to devise ways and means for sterilizing the infected body.

Stock vaccines and sera of the Neisser coccus is an advance in this direction and in some cases acts potently but autogenous vaccine seems to be the desideratum.

Through the assistance of Dr. Rhamy, autogenous vaccines are prepared as follows: The pus massaged from the vesicles and prostate is in its entirety spread on blood serum and incubated, the dependence being placed almost entirely on its multiplication within the pus itself. Bacterines are made from this in strengths of from 50,000,000, 150,000,000 to 500,000,000. The patient, besides all other treatment, is injected every other day with a gradually increased dose unless a reaction occurs.

Results in patients treated with these bacterines indicate that they are beneficial and comparing the stock from the homologous ones, I think that the autogenous are the ones of choice, for the degree of virulence will be equalized in each individual subject. The mixed infection will also be counteracted. While it takes many cases to prove a point, yet, I am convinced of the value of this part of the treatment, which admits a possibility, at least, of removing the infection in the vesicle even if there is changed tissue left behind.

DISCUSSION

DR. WILLIAM T. BELFIELD, Chicago: The experience of Dr. Barnett is encouraging, and yet it has been my sad observation that even autogenous vaccines cannot be relied on to produce the satisfactory and sanguine results sometimes reported. I have never used mixed cultures. This is a new phase of vaccine therapy, and it is inspiring to hear of the gratifying results obtained by Dr. Barnett. Pure cultures, from my limited observation, seem to be quite as uncertain in the ultimate results as the stock vaccines. I have seen brilliant temporary results from both, and I have seen most lamentable failures from both, from which I am inclined to think I do not know exactly how best to use them. We get results more often from the stock vaccines, but also from the autogenous vaccines, where the gonococcus alone, or where one of the others alone has been used as the basis for the culture.

DR. BRANSFORD LEWIS, St. Louis: Some work in vaccine therapy is being carried on by Dr. Mark and Dr. Hall, of Kansas City, Mo., in which the results thus far obtained are similar to those reported by Dr. Barnett. These men have obtained better results by using autogenous cultures and injections than from stock cultures. They have observed failures in some instances in which they expected success, and are now investigating the cause of those failures.

DR. FREDERICK LEUSMAN, Chicago: A man urinated very frequently. His trouble was referred to the prostate. He applied to a number of physicians for relief without avail. A perineal prostatectomy was performed, and while the man recovered from the operation he was not relieved of the symptoms of frequent urination. He went to a laboratory, had autogenous vaccines made, and used them on the advice of some other practitioner. While he has not been cured, he is greatly relieved.

DR. HENRY JACOBSON, St. Louis: I have found that epididymitis has occurred in cases in which I have used the Kollman dilator, so that I have given up that method of treatment of the prostate, and seminal vesicles, and now rely on massage, tonics, and systematic exercise.

DR. FREDERICK W. ROBBINS: Dr. Barnett referred to the frequency with which he found gonococci in the fluid expressed from the prostate and seminal vesicles. That statement does not coincide with the experience of Young and other workers who have not been able to find any gonococci in cases of chronic prostatitis and chronic vesiculitis.

The Prostatic Urethra

DR. JOHN A. HAWKINS, Pittsburg: I wish to call attention to three conditions of the posterior urethra, although two of them are in reality prostatic. They are, first, contraction of the internal urinary orifice; second, suppurative lobular prostatitis, and third, the veru montanum. Suppurative lobular prostatitis is responsible for many cases of "morning drop." Enlargement of the veru montanum, with spastic contraction of the posterior urethra, prevents all the pus from passing into the bladder, and it seeps along the urethra to the external meatus. A positive evidence of its presence is the appearance of a copious discharge in a patient who, to all intents and purposes, is about well. The veru montanum is responsible for more human suffering than is generally charged to it. There

are certain chronic cases in which examination of the posterior urethra with the urethroscope will show the presence of a large veru montanum. The caput will be seen filling the urethra at this point. The actual cautery will serve well to reduce the swelling, but a quicker and better way is to remove the top of the hypertrophy with the sharp edge of the deep urethral tube. Inflammation of the veru montanum is not always due to gonorrhea, although this is its most frequent cause. It may be due to any of the causes which produce prostatitis, and it cannot be differentiated from the latter except by examination with the deep urethroscope. It may also complicate a prostatitis or a seminal vesiculitis, especially the latter when due to gonorrhea. The treatment in these cases is chiefly the judicious use of silver nitrate. Other preparations may be used, but silver nitrate, if intelligently employed, will obviate the necessity of using the proprietary preparations in this as in other urethral diseases.

DISCUSSION

DR. BRANSFORD LEWIS, St. Louis: Urologic practitioners attach too little importance to disturbances of the veru montanum. A physician thought he had an enlarged prostate with all the disturbances that prostatic affections lead to and wanted the prostate removed. He consulted a number of different surgeons on account of persistent burning in the deep urethra and prostatic region which was so intense that he gave up his practice. Among other things he received massage and irrigation treatment without avail. He had no residual urine. Palpation of the vesicle neck failed to reveal any enlargement of the prostate, consequently I told him that it would be ridiculous to remove the prostate; I used the posterior endoscope and made applications to the veru montanum which I found inflamed and very sensitive. This afforded only temporary relief. Later, through a perineal incision, I curetted and dug out the whole veru montanum and the floor of the urethra, sparing the roof and other parts of the prostatic urethra. This operation gave relief.

DR. H. KRAUS, Chicago: My results from the use of nitrate of silver have not been satisfactory in cases in which hypertrophy was present and ejaculations frequent. I find, however, by starting with an equal dosage of glycerin and iodin for the first treatment and following it up with pure tincture of iodin that I get excellent results. I saw several cases of marked hypertrophy of the veru montanum treated in Berlin by Dr. Goldschmidt. The hypertrophy was so great as to obstruct the posterior urethra. The patient could not urinate. Goldschmidt cauterized the hypertrophy with his operative endoscope and made longitudinal slits in some cases in the hypertrophy down to the rectum. This treatment was followed by good results.

DR. J. G. KELLER, Cleveland, Ohio: I have used pure stick silver in the treatment of these cases with gratifying results and frequently it is only necessary to give one treatment.

DR. A. C. STOKES, Omaha: I sometimes question whether it is the condition of the veru montanum *per se* that is the cause of the trouble with which we have to deal. I have always regarded it as an infection, either superficial or deep, of the ducts in the region of the veru montanum, extending out into the connective tissue more than anything else. The pathology is really one of chronic prostatitis, or chronic vesiculitis, or chronic infection of the ducts in the region of the veru montanum.

DR. LOUIS E. SCHMIDT, Chicago: Inflammation of the utriculus is of considerable importance and if it can be diagnosed and treated separately, well and good, but in the vast majority of cases the symptoms can be referred to disease of the veru montanum. In treatment, I have used not only direct cauterization of the posterior urethra, but the electrocautery and applications of nitrate of silver in a large number of cases without much benefit, and the results have been comparatively poor in the group of cases in which the symptoms apparently arise from pathologic conditions of the veru montanum.

DR. FREDERICK W. ROBBINS, Detroit, described a case in which he removed the veru montanum through the endoscope with a good result.

Surgery of Posterior Ureteral and Prostatic Abscess and Their Resulting Fistulæ

DR. B. M. RICKETTS, Cincinnati, Ohio: No form of pelvic abscess is more annoying to the patient and perplexing to the surgeon than these. The incision to drain an abscess cavity in this locality should be made with reference to drainage by gravity and after-care, especially if a fistula should result. Rupture of a stricture is the most common cause of urinary abscess. Urethral abscess is commonly due to disease, injury or stricture, the latter being the most frequent. Periurethral abscess is due to infection from the urethra through an opening in the urethra, resulting from disease or injury, or through the lymphatics or veins. Intraprostatic abscess may be single or multiple, large or small, and originate in any portion of the gland. The wall of the bladder is seldom the seat of an abscess, although such a condition has been known to exist. Abscess of the seminal vesicles is usually due to gonorrhea and may simulate a prostatic abscess. When a large abscess is situated in the upper portion of the gland, with or without the presence of pus in the urine, a suprapubic incision will not only serve for exploration, but for incision and drainage as well. Fistulas or sinuses require surgical attention more frequently than abscess, because the former seldom disappear spontaneously, while the latter quite frequently rupture and disappear without attention or complications.

Urethroscopy of the Posterior Urethra

DR. H. KRAUS, Chicago: The advantages of the Goldschmidt endoscope over others are the following: The fluid used for cooling the instrument and for distending the urethra is allowed to escape from the end of the endoscope with force enough to keep at abeyance the tissue which would otherwise protrude into the opening of the tube, but the force of the stream is not great enough to disturb, to any extent, the natural relation of the parts, and if so, this slight anemia is preferable to the marked hyperemia. Besides showing the ducts to the glands and Morgagni's crypts as seen in other endoscopes. We can scrutinize in detail the cicatricial tissue, the formation of which follows gonorrhea. It is certain that the normal color of the mucous membrane is preserved and that the slightest changes thereof produce a decided contrast in the picture. We are able to see pouch-like recesses of the mucosa as the result of a beginning stricture; such a pouch may resemble a diverticulum. They are usually situated above such a constriction. The border between anterior and posterior urethra can be plainly seen as a fold of the mucous membrane in the shape of a half moon, the base of which rests on the floor of the urethra. This band is described by the French as "*collette fibreux*." In the posterior urethra we can see more or less plainly the changes of the outlets which open on the floor of the deep urethra. The instrument covers a considerable field of vision and with only a few movements, which are not very painful to the patient. The entire pars prostatica becomes visible. The ejaculatory ducts can be seen clearly with this instrument, and when involved their mouths appear as yellow spots, showing the pus plugging up the openings. The veru montanum is usually mushroom-shaped, but may present irregularities of all kinds. In cases of epididymitis and profuse phosphaturia, there is deepened coloration of the mucous membrane. Goldschmidt reports a case of an abscess of the scrotum with subsequent cicatrization thereof, in which the veru montanum had been bound down until it almost became flush with the floor of the urethra. That portion of the urethra between the colliculus seminalis and the internal sphincter, was never previously produced as clearly as with the Goldschmidt endoscope. The fact that the operative work on the posterior urethra has never received hearty support is due to the fact that the field of operation has always been more or less in the dark, and because of the diameter of the endoscope would not admit of passing moderately sized instruments, not to speak of large-sized ones. This has been overcome to a large extent by the Goldschmidt endoscope, which admits of the passing and manipulating of such instruments as are deemed necessary in the surgical treatment of the posterior or anterior urethra, under the eye of the operators, thereby limiting and actually fixing the work desiring to be accomplished.

Medicolegal

Malpractice by Corporation and Unlicensed Person—Restriction of Damages—Expert Testimony Required and to Be Duly Weighed

The First Appellate Division of the Supreme Court of New York says that the case of Lubbe vs. Mathew Hilgert and the Hilgert Curative Footgear Institution, 120 N. Y. S., 387, as developed by the evidence adduced on the trial was brought to recover damages alleged to have been sustained by the plaintiff in consequence of advice received from the defendant Hilgert, representing the defendant corporation, and acted on, which resulted in the abandonment of the use for the time being of a brace for his right hip which had been prescribed for a disease of the hip from which he was suffering, it being claimed that the abandonment of the use of the brace resulted in aggravating and spreading the disease.

The defendant corporation was incorporated for the purpose, among other things, of "manufacturing boots, shoes and general footwear and external mechanical appliances for the restoration of health to the human body," and to erect, equip, conduct and maintain such "buildings and establishment as may be suitable for the needs and purposes of the corporation and for the accommodation and comfort of its patients and customers." On its letter-heads were printed "locomotor ataxia," "paralysis," "rheumatism," and "gout" in a manner to indicate that it manufactured or sold footgear or other external mechanical appliances for the treatment or alleviation of those diseases. Of course, the corporation could not practice medicine, and it appeared that the defendant Hilgert was not a licensed physician. No question, however, with respect to the correct theory of the liability of the defendants was presented by the appeal, for on the trial the plaintiff elected to proceed against them on the rule of liability applicable in an action against a physician for malpractice, and that course was followed without objection.

The trial resulted in a verdict for $3,000 in favor of the plaintiff, but the court thinks that was, in amount, clearly against the weight of evidence, and sends the case back for a new trial. It says that the evidence showed that at the time the plaintiff was taken to the defendants for treatment he was suffering from tubercular hip-joint disease, which had already progressed to its third, or an incurable, stage, as was manifested by abscesses. His right to recover damages must necessarily depend on medical evidence, for the question was to what extent, if any, the failure of the defendants to properly treat him aggravated the disease from which he was suffering or increased his pain or suffering. That question could neither be decided on the testimony of laymen nor by the jurors on their own knowledge and experience without testimony. The defendants did not cause, and were not responsible for, the hip disease, and, since it was incurable when he came to them for treatment, they were not responsible in this or any form of action for their inability to cure it, notwithstanding the assurances they gave in that regard. They were responsible on the record before the court only for the pain and suffering or disability which flowed from their erroneous advice to the plaintiff to abandon the use of the brace for his hip; and, although that probably could not have been shown with precision, it should have been shown approximately to warrant a recovery.

It is proper, and in many cases important, that the jury should be cautioned with respect to the weight to be given to expert testimony, and, in order that they may be able to properly weigh such testimony, their attention should be drawn by the court to the fact that, when given in answer to a hypothetical question, its weight depends entirely on whether or not the facts recited therein are established by the evidence, and that in all cases it depends on the knowledge, accuracy and honesty of the witnesses. But the jury should be instructed that the testimony of physicians, whether with respect to what they have seen and observed or with r spect to their opinions on an assumed state of facts, is not to be rejected or accepted at will, but is to be weighed and considered by the jury the same as any other evidence; the jury being, of course, at liberty, after weighing and considering such testimony, to disbelieve it when it is discredited or disproved by other testimony in the case or when the jury believes that the witness has testified falsely or was mistaken as to any fact or opinion.

Hospital Responsible for Ambulance and Driver Bearing Its Name

The Second Appellate Division of the Supreme Court of New York affirms, in Kellogg vs. Church Charity Foundation of Long Island, 120 N. Y. S. 406, a judgment for damages in favor of the plaintiff for personal injuries he sustained in a collision due to negligence in the turning of a corner by an ambulance which, as well as its driver, bore the name of a hospital owned and conducted by the defendant. An attempt was made to throw whatever responsibility there was for the accident on a livery stable keeper who furnished the horse and the driver for the ambulance, but that did not succeed.

The ambulance being labeled with the name of the hospital and the driver wearing a cap owned and furnished by it, on which was its name, the court says that those were the defendant's declarations that the driver was its servant, engaged in its business, and clothed with such rights and immunities as is enjoyed in the use of the streets. This manifestation was an invitation to the public to consider the driver its (the defendant's) servant, to respect him as such, to grant him by courtesy the latitude that his mission demanded in the matter of speedy passage, and to yield him the rights in the street that belonged to a real servant of the defendant.

The status thus given to the driver obtained for him privileges and immunities that belonged to the defendant. He thereby became its acknowledged servant, abroad on its urgent and merciful errands, and entitled to the right of way allowed to those operating ambulances for their proper purposes. An ambulance in such use may be driven in derogation of certain usual rules of the road. That does not mean that a stablekeeper, in his capacity as such, and in furtherance of his business, may so drive a vehicle in the form of an ambulance, but that a person engaged in the business of succoring the sick, injured, or dying may transport them, facilitated by such paramount right.

The case, it is further suggested, does not seem to be at all like that of the ordinary hiring of a livery turnout, or of the employment of a truckman to transport goods, in which cases the driver remains the servant of the independent contractor. For the purposes of this case the defendant might be regarded as in the position of the liveryman or the truckman, and as having hired the horse and servant of another for temporary use in its business, the servant becoming for this its servant.

Unsatisfactory Proof of Physician's Account

The Court of Appeals of New York says, in Swan vs. Warner (90 N. E. R. 430), that this action was brought by an administrator to recover for professional services which had been rendered by a physician. The account consisted of many items, and extended over several months. With the exception of some very slight oral testimony, which it was claimed established one of the items of the account, the evidence depended on consisted wholly of entries in books of account claimed to have been kept by the physician.

The rules governing the admission of a party's books for the purpose of sustaining his claim in an action like this are stated as follows in Vosburgh vs. Thayer, 12 Johns, 461: "They ought not to be admitted where there are several charges, unless a foundation is first laid for their admission by proving that the party had no clerk; that some of the articles charged have been delivered; that the books produced are the account books of the party; and that he keeps fair and honest accounts—and this by those who have dealt and settled with him." This rule, in substance, has been reaffirmed often.

It was a very serious question amongst other things whether the plaintiff sufficiently established the rendition of any of the items of services for which recovery was sought by evidence independent of the books. The identification of the defendant was unnecessarily meager, and the evidence of his visit to the physician on one occasion for the supposed purpose of receiving professional treatment left much to presumption.

But the judgment recovered in this case is reversed, and a new trial ordered, principally because very many of the items for which recovery was allowed explicitly indicated that the

services charged therein were rendered to a nephew of the defendant. There was no evidence of any express authority to charge such services to the defendant, and no proof of any circumstances which, without express authority, warranted such a charge, and it was therefore clearly error to permit the account to be received in evidence for the purpose of establishing those items.

Injury as Cause of Death from Delirium Tremens

The First Appellate Division of the Supreme Court of New York says, in McCahill vs. New York Transportation Co. (120 N. Y. S. 1), an action brought to recover for a man's death charged to the negligence of the company, that the direct injury received was synovitis of the knee and a broken thigh. The medical testimony established that the man died of delirium tremens. Summarizing the medical testimony, it was to the effect that, in the opinion of the physicians from what they observed, the man was in a markedly alcoholic condition when he was admitted to the hospital after his injury; that he was not then suffering from delirium tremens, which did not develop until the afternoon of the next day; that no one can say that the use of alcohol will necessarily produce delirium tremens; but that delirium tremens can only occur when there is a previous alcoholic condition; and that a severe injury of the character suffered by this man, while not an inducing cause of delirium tremens, will precipitate it.

On all the evidence, the court thinks it was a question for the jury whether the injury caused by the negligence of the company did not produce the delirium tremens which, in the opinion of the physician, was the immediate cause of death. If the man, but for the injury, might have lived for many years, and the injury, plus his condition when he received it, caused the delirium tremens, of which he died, the court considers that the case came within the meaning of the provision of the code which gives a cause of action to recover damages for a wrongful act, neglect, or default by which a person's death is caused.

The court adds that it does not think that reckless drivers of automobiles are to be relieved of responsibility because their victims are sick, infirm, diseased, or even addicted to the use of alcoholic drinks, when it fairly appears that their condition was aggravated or death precipitated as a result of the injury received.

A judgment for the plaintiff is affirmed, two members of the court dissenting.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

April 9

1 The Contractile Elements in Connective Tissue. J. Wright, New York.
2 Relationship Between Rectal Diseases and those of the Female Pelvic Organs. J. P. Tuttle, New York.
3 *Acid-Fast Organisms in Waters. E. Burvill-Holmes, Philadelphia.
4 *Are Acid-Fast Bacteria Other than the Tubercle Bacillus Commonly Met in Clinical Laboratory Work? A. B. Clifford, Las Animas, Colo.
5 Ophthalmic Nursing. M. L. Foster, New York.
6 *The Bead Test of Einhorn and the Test Diet for Intestinal Diseases of Adolf Schmidt. J. G. Wells, New York.
7 The Legal and Moral Obligations of a Physician Confronted with a Case of Tuberculosis. G. W. Beach, Binghamton, N. Y.
8 Banti's Disease. O. Lerch, New Orleans.

3. **Acid-Fast Organisms in Waters.**—Burvill-Holmes presents the results of the examination of a few samples of water or waters which are to be used in the preparation of solutions, etc., in work which has for its purpose the demonstration of the tubercle bacillus, for instance, in the examination of feces and blood. He says the water should be examined with the microscope so as to preclude the possible presence of any acid-fast organisms which might cause a misinterpretation of results. Acid-fast organisms are present in many specimens of water—not necessarily distilled—providing they are old and have been open to air contamination. Failure of bacilli to decolorize with Pappenheim's solution does not imply that they are tubercle bacilli.

4. **Acid-Fast Bacteria.**—It should be borne in mind, Clifford says, that there are no such things as acid-fast bacteria in an absolute sense of the term. Aqueous solutions of any acid, especially any inorganic acid, will remove the color from any fuchsin-stained organism; and the length of time required to remove the color will vary, not only with the character of the organism, but with the intensity of the primary fuchsin staining, and the strength and composition of the acid used. It is true that the tubercle bacillus shows considerable variation in its staining properties. The ease or rapidity with which it takes up the primary stain, as well as the resistance which it shows to the decolorizing influence of acid, or acid alcohol, is a function which varies considerably with its environment. Still there are good reasons for expressing the opinion that as an almost invariable rule, the tubercle bacillus stains with greater difficulty, and offers more marked resistance to the decoloring influence of acids or acid alcohol, than any other member of the group of acid-fast bacteria.

During the past month, Clifford has been searching for acid-fast organisms in water, and wherever it seemed possible that they might appear as a confusing element in clinical laboratory work. He summarizes his findings as follows: 1. Acid-fast organisms, other than the tubercle bacillus, are rarely encountered in clinical laboratory work. 2. Such organisms, as a contamination of distilled water, are a negligible factor in staining for the tubercle bacillus. 3. When, in the examination of tuberculous patients, or those suspected of being tuberculous, acid-alcohol fast organisms having the morphology of the tubercle bacillus are found, after having stained by the previously mentioned method, we are fully justified in making a diagnosis of tuberculosis.

6. **The Bead Test and the Test Diet.**—In an effort to answer the question whether the bead test is practicable and reliable, Wells undertook a comparative analysis of 20 cases, using the test diet for intestinal disease as devised by Dr. Adolf Schmidt as a basis to work on. The digestive test capsule, or bead test, was prepared according to the directions given by Einhorn. Wells found that it takes the same amount of time to make a digestive capsule that it does to examine a stool. It is easier to obtain the beads than is a proper stool in patients not confined to the house and who are taking their meals at restaurants. No expert knowledge is required to examine the beads, while a certain amount of skill is required to examine a stool. Many physicians would examine the beads especially when they do not have to make the digestive capsule themselves, when under no consideration would they examine a stool. The bead test is accurate enough to be of practical value. When the diet is regulated according to the findings after the bead test and unsatisfactory results are obtained, the patient should be placed on a strict diet, as advised by Dr. Adolf Schmidt, and the stool examined at the end of three days. The bead test gives a very fair idea of how long the food remains in the intestinal tract, which the test diet does not. It should be borne in mind that the only functions of the bead test are to show the digestibility of proteids, fats and carbohydrates and the mobility of the intestinal tract.

Medical Record, New York

April 9

9 Errors of Diagnosis in Surgical Lesions of the Kidney. A. B. Johnson, New York.
10 Medical Practice Laws. F. M. Crandall, New York.
11 *Is Insanity Increasing? A. J. Givens, Stamford, Conn.
12 *Antidote for Aluminum Phosphate: The Poison that Causes Milk-Sickness. E. L. Moseley, Sandusky, Ohio.
13 The Card System for Recording Histories of Patients in Private Practice. E. C. Hill, U. S. Army.
14 The Management of Hemorrhage During Operations on the Tonsil. C. J. Imperatori, New York.

11. **Insanity Increasing.**—Givens quotes statistics from various countries and states of the Union, which show that there is a steady increase in the number of individuals under public care. Although alcoholic excesses are, for the most part, responsible, prohibitory legislation and local option have in no way improved the conditions as to the use of alcohol. Givens sees the solution of the problem of stopping its use in a law prohibiting the sale of liquors until after they have

been ten years in storage, and the poisonous qualities have been changed so as to render the liquor comparatively harmless. Beer should not be sold until it has been stored for 6 months. High-grade liquors properly made and aged lose much of their poisonous qualities.

12. **Antidote for Milk-Sickness.**—According to Mosley, the substance contained in white snakeroot that causes milk-sickness is aluminum phosphate. Bicarbonate of soda is an antidote to the poison. The poisoning seems to be due to an acidosis produced in the blood; hence the bicarbonate of soda, by increasing the alkalinity of the blood, counteracts its effects. If given with a vegetable diet the poison is harmless, but with animal food its effects are poisonous.

The Boston Medical and Surgical Journal

April 7

15 *Chronic Primary Intussusception in the Adult. H. W. Goodall, Boston.
16 *Psychic and Somatic Factors in Patient with Acute Delirium Dying of Septicemia: Experimental Guinea-Pig Infection with *Staphylococcus Albus*. E. E. Southard and J. G. Fitzgerald, Toronto.
17 Uterine Constriction Bands Complicating Labor. J. C. Hubbard, Boston.
18 Pain Relieved by Manual Therapy. E. C. Thompson, Boston.

15. **Chronic Primary Intussusception.**—Goodall's analysis is based on a study of 122 cases, 1 of which occurred in his practice, 4 were taken from the records of the Massachusetts General Hospital, and 117 were collected from the literature. The following points are emphasized:

1. Chronic primary invagination in the adult is probably not so infrequent as might be supposed, since in the great majority of the reported cases the true nature of the disease has been unsuspected throughout its course, the diagnosis being made at the time of operation or post-mortem examination.

2. This failure to diagnose is in many of the cases to be explained by unfamiliarity with the symptomatology, since the clinical picture has often been typical enough to at least suggest the nature of the disease.

3. The disease, if allowed to run its natural course, is usually fatal, whereas with proper surgical treatment, especially if an early diagnosis is made, the mortality should be low.

4. The disease often simulates some grave abdominal condition such as tuberculosis or carcinoma in which a most unfavorable prognosis is given and operation deemed inadvisable, emphasizing the importance of excluding chronic invagination in all obscure diseases of the abdomen.

16. **Psychic and Somatic Factors in Acute Delirium.**—A well-educated negress, with probably some hereditary tendency to insanity, marries at 28 an impotent husband of 60. Six and one-half years later she develops nervousness and insomnia, together with headaches and constipation, which the subsequent history indicates are probably due to the growth of fibromyomata of the uterus. Meantime the patient complains at times of sexual dissatisfactions. The uterine growth, which only later was certainly diagnosed as fibromyomatous, becomes palpable 15 months after the initial train of symptoms had set in. Whether the eroticism which accompanied the other symptoms is at all conceivably due to impulses from the uterine region is doubtful. Operation is refused.

Acute insanity of delirious type develops, and the only physical symptoms then of note are acne and a slight swelling of the legs (observable by family physician, but not noted by examining physicians unfamiliar with patient). Following the somatic symptoms, it appears that a marked swelling of the left leg, with fulness and tenderness of the popliteal space, was first noted in hospital 15 days after onset, accompanied by a temperature of 101 F. The swelling subsided to some degree later, so that it became difficult to say that one leg was larger than the other. It is hard to say at what time the iliac vein thrombi began to develop. Possibly the swelling of both legs, noted in the acute outburst, was due to pressure on the veins by the fibromyomata rather than to the growth of thrombi within the veins. Also it is impossible to say when the septicemia began. Whether the septicemia developed prior to the acute outburst or 15 days later, it remains certain that in the first 15 days of the insanity there was evidence of an important somatic disease (massive fibromyomata exerting pressure on the iliac veins), the results of which became later inextricably mingled with the mental symptoms.

The Lancet-Clinic, Cincinnati

April 9

19 Sexual Impotence in the Male. A. W. Nelson, Cincinnati.
20 Arthritis Deformans. J. V. Shoemaker, Philadelphia.
21 Case of Dermatitis Venenata. C. J. Broeman, Cincinnati.

Virginia Medical Semi-Monthly, Richmond

March 25

22 The Physiology of the Adrenals in Relation to Poisoning by Adrenal Preparations. C. E. deM. Sajous, Philadelphia.
23 Intracapsular Fracture of Hip: Prognosis. J. N. Upshur, Richmond.
24 Headache. G. L. Servoss, Fairview, Nev.
25 Surgical Drainage. L. Sexton, New Orleans.
26 Causes and Treatment of Rheumatic Fever. W. S. Gordon, Richmond.
27 Regurgitation from the Bladder to the Kidney During Ureteral Catheterization. F. R. Hagner, Washington, D. C.
28 Manic-Depressive Insanity. D. P. Hinckling, Washington, D. C.
29 Acute Nephritis Following Severe Tonsillitis. O. Marshall, Brandy Station.

The Northwestern Lancet, Minneapolis

March 15

30 *The Contagiousness of Poliomyelitis. H. W. Hill, Minneapolis.
31 Spinal Anesthesia. F. R. Wright, Minneapolis.
32 Diseases of the Stomach and Their Treatment. H. L. Knight, Minneapolis.
33 *Diverticula of the Sigmoid. A. W. Abbott, Minneapolis.
34 Prevention of Appendicitis. A. Kuhlmann, Melrose, Minn.
35 An International Commission on the Control of Tuberculosis of Domestic Animals. M. H. Reynolds, St. Paul.

30. **Contagiousness of Poliomyelitis.**—Hill has tabulated 81 cases, occurring in 69 families. These figures show that the highest number of cases at any one age is 19 at 2 years old (from 1½ to 2½ years); i. e., about 23 per cent. of all cases were at or about 2 years old; 73 per cent. of all children of this age in the affected families were attacked. The group age-incidence is most marked at 1 to 3 years (1 and over to 3½ years). About 53 per cent. occurred in this group; 66 per cent. of all the children of this age group in the affected families were attacked. The sex-incidence is 46 males and 45 females (certain cases available for this calculation, in addition to those suitable for other calculations, being added in). Whether or not the sex-incidence at different ages is different could hardly be determined from these scanty figures. There seemed to be no relation to nationality. The nationalities predominating in each community, judging from the general information obtainable, naturally suffered most. Exact figures showing the nationality distribution of the different communities were not available. Eight of the 69 families showed secondary cases; 4 of these families showed 1 secondary case each, and 4 showed 2 secondary cases each.

33. **Diverticula of Sigmoid.**—In Abbott's case the cause of the diverticulum was a stricture. The formation of fecal stones proximal to that stricture followed by which the ordinary fecal contents had passed naturally and for a long time, and that the stones had simply buried themselves in the wall of the gut. That the stones were formed before the diverticula was rendered almost certain from the fact that there were still several lying free in the lumen of the gut of the same size and hardness as those in the diverticula.

Journal Tennessee State Medical Association, Nashville

March

36 The Correction of Uterine Displacements. C. N. Cowden, Nashville.
37 Woman in the Field of Medicine. D. L. Wilder, Knoxville.
38 Diagnosis and Treatment of Amebic Ulceration of the Large Intestine. A. B. Cooke, Nashville.
39 Intussusception in Children. J. Overton, Nashville.

Journal Medical Society of New Jersey, Orange

April

40 Edema. W. L. Pyle, Jersey City.
41 Summer Grip. J. Douglas, Morristown.
42 The More Common Affections of the Nose and Throat; Diagnosis and Treatment. G. H. Cocks, New York.
43 Urethral Stricture. C. L. de Meritt, West Hoboken.
44 *Health Education of the Juvenile Public. W. H. Shipps, Bordentown.
45 *Sarcoma of the Uterus in a Child: Operation: Recovery. W. D. Miningham, Newark.

44. **Health Education of Juvenile Public.**—It is held by Shipps to be the duty of every parent and guardian to

instruct the child in Nature's laws so far as they concern his physical welfare, at as early a date as the child is capable of grasping such information, and no false sentimentalism should seek to keep from the child that knowledge of his physical being which he has a perfect right to demand. Were this course more universally adopted, he believes much suffering and misery would be averted and the labors of the sanitarium appreciably lightened. A proper course to pursue is to aid in the organization of societies, whose aim should be to contribute largely to the creation of a sentiment in favor of this work on the part of the general public, which, if accomplished, will unodubtedly aid materially in gaining the results anticipated. In addition to the methods referred to, the health culture of the young can also be largely facilitated by other resources, such as local boards of health, boards of education, medical school inspectors, health officers and representatives of the medical profession, all of whom should recognize the opportunities they hold of imparting to the young such knowledge as it is unquestionably their duty to give careful attention to.

45. **Sarcoma of the Uterus in a Child.**—A case of primary sarcoma of the uterus in a child of 12 is reported by Miningham. The tumor was of a small, spindle-cell variety, and presented many areas of gangrene. With the exception of an attack of scarlet fever at 5 years, the patient had always been well. Menstruation had never been established. In December, 1908, a bloody flow from the uterus occurred, which continued uninterruptedly for three weeks. It was attributed to menstruation and no examination was made. The girl was never well afterward; a gradual loss of weight and strength set in, growing progressively worse. Slight pain and discomfort in the pelvic region were often complained of. Irregular hemorrhages occurred frequently until Oct. 15, 1909, since which time the flow had been more or less constant. Drugs and tampons were of service now and then, but during the latter part of her illness were entirely ineffective. The curette simply aggravated the condition. Septic absorption from the gangrenous mass added considerably to her misery. The temperature curve was of the true septic type.

The diagnosis of sarcoma was made, and although a distinctly bad surgical risk, Dr. Ill urged an operation as offering the only chance. Examination showed a large, freely movable tumor extending to the umbilicus and occupying the entire pelvis. At the cervix there presented a friable polypoid mass which bled on the slightest manipulation. The combined vaginal and abdominal operation was performed, removing uterus, tubes and ovaries. Improvement set in immediately and continued uninterruptedly.

Journal of the South Carolina Medical Association, Florence

February

46 Pneumonia. O. B. Mayer, Newberry.
47 Treatment of Pneumonia. S. L. Swygert, Greenwood.
48 Congenital Dislocation of the Hip. A. R. Taft, Charleston.
49 Factors which Govern Drug Action. G. E. Thompson, Easley.
50 Dysmenorrhea. J. H. Teague, Laurens.
51 Uncinariasis. O. W. Nettles, Spartanburg.
52 The Family Physician. S. G. Dixon, Philadelphia.

Bulletin of the Lying-in Hospital of the City of New York

September, 1909

53 *Rupture of the Uterus During Labor. R. W. Lobenstine, New York.
54 *The Results and Technic of the Lying-in-Hospital Out-Patient Service in 45,000 Confinements. J. A. Harrar, New York.
55 Constipation as Treated in the Babies' Class. E. L. Coolidge, New York.
56 *The Hour of Birth. C. B. Knapp, New York.
57 *Avulsion of the Puerperal Uterus Following Inversion. J. A. Harrar, New York.
58 *Incarceration of the Pregnant Uterus. R. W. Lobenstine, New York.

53. Abstracted in THE JOURNAL, Oct. 9, 1909, p. 1218, and published in the *American Journal of Obstetrics* for November, 1909.

54. **Results at Lying-in Hospital.**—This series of cases occurred during the last 14 years, and the mortality among the mothers was found to be 0.32 per cent. (144 cases), which is 1 death to about every 300 deliveries. This includes all patients transferred during labor or afterward to the Lying-in Hospital or other hospitals and subsequently dying in the wards; 99 died in the tenements and 45 in the hospital wards after admission from the tenement service. The chief causes of death were sepsis, rupture of the uterus, eclampsia and placenta prævia, in the order named; 36 women, or 1 in 1,250 (.008 per cent.) succumbed to septic infection. Harrar attributes the frequency of this condition not only to the patient's surroundings, but also to the practice of employing midwives, who are both dirty and incompetent. Twenty women died as the result of rupture of the uterus. In 9 the rupture was discovered after performance of an internal podalic version and the accident was ascribed to the operation. There were 6 cases of spontaneous rupture in prolonged labors; in 1 the cervix had been amputated a year previously and the rupture was produced during a high forcep delivery; 1 followed injury from a fall and 1 occurred in the scar from a formal Cesarean operation. Placenta prævia ranked fourth on the list as a mortality factor, there having been 16 deaths from this condition. The remaining deaths were due to pneumonia (8 cases); cardiac diseases (6 cases); premature detachment of the placenta (4 cases); postpartum hemorrhages (4 cases); and pulmonary phthisis (5 cases); 4 deaths were ascribed to uremia and 1 to shock; 5 women died after the Cesarean section had been performed. A number of other causes of deaths are mentioned which claimed 1 or 2 patients each, and make up the remaining number.

Harrar claims that as one-quarter of the total mortality was due to sepsis, which is a preventable cause, that a possible future reduction in these figures may be hoped for. An analysis of the deaths from this cause show that in succeeding groups of 10,000 cases each, a marked reduction has taken place in the later ones. He describes the method in which surgical cleanliness on the part of the patient and the attendant is secured and as the results of which the improvement has taken place.

56. **Hour of Birth.**—Knapp presents certain conclusions regarding the hour of birth which he bases on a series of about 39,000 cases. He found in this series that the largest number of births took place during the hour from 11 p. m. to midnight, while the smallest number occurred during the hour from 6 to 7 p. m. As the length of the average labor is twelve hours' duration, it would appear that in the majority of cases this process begins between the hours of 10 a. m. and 10 p. m. Knapp believes that the activities of the day furnish the exciting cause in the production of labor and the tendency to start the same is greater during the day time because of the patient's muscular exertions connected with her ordinary movements.

57. **Avulsion of the Puerperal Uterus.** Harrar reports a case of complete avulsion of the puerperal uterus following version, in a young woman of 24, in her fourth pregnancy. She gave a history of a beginning miscarriage for which a doctor was called in, who extracted the fetus after only partially dilating the cervix. In extracting the placenta, which was firmly adherent, he inverted the uterus. He diagnosed this condition as a large polyp, which he proceeded to remove by twisting it off. He succeeded, but the woman bled profusely and went into collapse. After packing the vagina with cotton, he sent the patient to the hospital. On examination after admission, the bladder was found to be intact, although the serous coat was torn, and a portion of the broad ligament with the ovary attached was hanging down in the vagina. This was removed, the area cleansed as well as possible and the cavity packed with iodoform gauze. The patient made almost an uneventful recovery, without any evidence of septic infection.

58. Published in the *American Journal of Obstetrics and Diseases of Women and Children*, December, 1909.

Colorado Medicine, Denver

March

59 Surgical Typhoid Infections of the Hepatic Organs. E. G. Edwards, La Junta.
60 An Avoidable Form of Infant Starvation. H. B. Whitney, Denver.
61 Surgery in the Tuberculous. D. P. Mayhew, Colorado Springs.
62 The Use of Tuberculin in Pulmonary Tuberculosis. W. T. Little, Canon City.
63 A Pharmacologic Study of the Drugs used in Diseases of the Genitourinary Tract. W. A. Jolley, Boulder.

done by C. H. and W. J. Mayo, was 1,775. Of these, 1,141 were gastrojejunostomies. In 715 cases the operation was for duodenal and gastric ulcer, in 167 cases for cancerous obstruction at the pylorus, and 259 were in connection with partial gastrectomy. The majority of the latter operations were for malignant disease. Of the whole number, not a single patient developed true jejunal ulcer; nor have any such cases come to the Mayos in which gastrojejunostomy had been performed by other surgeons. They report 3 cases corresponding to the gastrojejunal or pseudojejunal type of ulcer.

99. **Excision of Fat of Abdominal Wall.**—Kelly says that it is easy to see how much tissue ought to be removed by pulling the mass up and away from the body. An incision above and below on the pendulous mass made a little above the lines of dissection will remove enough and yet leave enough skin for approximation. With a little practice, the surgeon will be able to decide this with his eye as the patient lies on the back on the table, or if he is uncertain he may cut across the abdomen below from side to side and then cautiously carry the upper incision from side to side, measuring with the eye and testing the mobility of the tissues above to see that they will slide down to meet the lower flap. This dissection can be made very rapidly. All hemorrhage must be checked; deep vessels must be caught as they come out of the fascia and ligated with catgut. The incision must be carefully covered with hot gauze while operating, and the incision sloped a little inward so that apposition will be perfect. All vessels are tied with fine catgut; the fat sewn together with catgut and the skin with silkworm gut and horsehair. At either end of the incision a small cigarette drain of rubber protective tissue is inserted. The dressing is with silver foil and sterile gauze. These wounds, in spite of their immense size, heal promptly, and there is practically no postoperative discomfort.

100. **Inflammatory Tumors of the Sigmoid.**—Myer describes a primary, circumscribed, inflammatory tumor of the sigmoid, benign in its pathologic findings, but demanding radical treatment on account of a great deal of pain in the left side; a bloody discharge from the vagina; very severe constipation; at time the passing of gas, and painful stools.

102. **Congenital Sacs in Oblique Inguinal Hernia.**—Hessert claims that the chief etiologic factor underlying the development of oblique inguinal hernia in fully three-fourths of the cases can be traced to the pre-existence of a congenital sac, the result of faulty closure of a part or the whole of the vaginal process. This proposition has been sustained in the last 100 operations in Hessert's practice.

106. **Diffuse and General Peritonitis.**—In the 500 cases of diffuse or general peritonitis reported by Kennedy, there were 9 deaths. This includes the deaths in the hands of several assistants. In 124 of these cases the incision was in the median line for a general peritonitis with distention. In the remaining cases with a diffuse peritonitis, the toilet was always proportionate to the extent of involvement of the peritoneum. Three of the deaths were in patients over 70, one of the patients died one hour after the operation. This patient went on the table with a subnormal temperature of 96 degrees. Another patient lost was a vigorous man with cecum and appendix on the left side. The appendix was gangrenous and retrocecal. The error in this case was that Kennedy made the incision on the right side. It should have been in the center. The toilet of the left side would have been better and should have saved this patient; as it was, he died with symptoms of retroperitoneal infection.

All patients had the open treatment, not a stitch in the abdomen and the cofferdam drain. The Fowler position was not used in any case; in fact, the reverse position was used, the foot of the bed being elevated in the worst conditions. This position was not used with the idea of increasing or decreasing absorption, but to place the patient in the best position to resist shock of operations. Proctoclysis was not consistently used, but Kennedy has no objection to its use.

109. Published also in *Illinois Medical Journal*, March; see abstract No. 139.

112. **Vaginal Hysterectomy for Prolapsus.**—In cases in which there is a marked prolapsus of the uterus associated with much redundancy of the anterior and posterior vaginal walls and occasionally with a greater or less amount of elongation, vaginal hysterectomy, combined with a wide removal of the surrounding vaginal mucosa, closure of the vaginal vault and repair of the perineum is the operation performed by Cullen. He outlines the area to be removed at the commencement by cutting just through the vaginal mucosa downward from the bladder, entering Douglas' cul-de-sac behind in order that he may get his bearings, removes the uterus and joins the vaginal mucosa to the peritoneum of Douglas' pouch. The peritoneum of the anterior pelvic wall is then sutured to that of the posterior wall, and in this way the pelvis is completely shut off.

Iowa Medical Journal, Des Moines

March

116 *Blennorrhea Neonatorum—Cause, Prevalence and Prophylaxis. L. W. Dean, Iowa City.
117 *The Cost of Ophthalmia Neonatorum in Iowa. A. G. Rose, Des Moines.
118 *The Practical Aspects of Prevention of Ophthalmia Neonatorum. R. M. Lapsley, Keokuk.
119 Morbid Worry. W. J. Egloff, Mason City.
120 *Early Diagnosis of Diseases of Children that lead to Deformities. F. Mueller, Chicago.
121 Cholangeitis. N. Schilling, New Hampton.
122 Cholecystitis. S. T. Gray, Albia.

116, 117, 118, 120. Abstracted in THE JOURNAL, July 17, 1909, pp. 229, 230.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

March

123 *Cerebrospinal Meningitis in an Infant Two Months Old; Diagnosis made by Tapping the Lateral Ventricles; Treatment by Intraventricular Injections of Flexner's Antimeningitis Serum; Recovery. L. Fischer, New York.
124 Lithia Waters as Therapeutic Agents. H. L. Taylor, Philadelphia.
125 Tonsillar Hypertrophy. R. B. Scarlett, Philadelphia.
126 Joint Conditions Causing Pensionable Disabilities. F. P. Henry, Philadelphia.
127 *The Coal-Tar Derivatives versus Opiates. C. W. Dulles, Philadelphia.

123. Published in *The New York Medical Journal*, March 26, 1910, and abstracted in THE JOURNAL, April 9, 1910, p. 1234.

127. **Coal-Tar Derivatives Versus Opiates.**—Sajous points out that the history of coal-tar derivatives as therapeutic agents shows that it is not through the medical profession that the sins attributed to them have been perpetuated, but through lay manufacturers of headache powders. If such a reason were to prevail among those who oppose the use of acetanilid, antipyrin and acetphenetidin, in practice or their retention in the Pharmacopeia, then all our valuable therapeutic agents should be similarly treated, since all in turn have once on a time been used by empirics or enterprising commercialists who look on human suffering merely as an opportunity to satisfy their greed. Even the fate of opium and its analgesic salts would be sealed by the evil reputation soothing syrups have given them.

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Journal Indiana State Medical Association, Fort Wayne

March

64 *Unusual Injuries in the Region of the Shoulder-Joint. P. F. Martin, Indianapolis.
65 The Home Treatment of Tuberculosis. J. C. Blossom, Richmond.
66 The Medical History of Indiana (continued). G. W. H. Kemper, Muncie.
67 Congenital Heart Disease. L. T. Rawles, Huntertown.

64. **Unusual Injuries of Shoulder-Joint.**—Martin has found that fracture dislocations of the upper end of the humerus are of greater frequency than is generally believed; the condition is often not recognized. In all cases of dislocation of the humerus, an attempt at reduction by gentle manipulation under anesthesia having failed, he advises that open arthrotomy should be done at once. Immediate open arthrotomy, under favorable circumstances, should be practiced in all cases of known fracture dislocations of the upper end of the humerus. There should be no old unreduced dislocations. Radiography should be employed in connection with a thorough, properly painstaking physical examination, and not as a substitute, conclusive diagnosis depending on the clinical manifestations as the keynote and the radiogram as correlative evidence.

Ohio State Medical Journal, Columbus

March

68 The X-Ray Examination of the Stomach. S. Lange, Cincinnati.
69 The Remote Effects of Shock and Concussion. F. Warner, Columbus.
70 The Professional Anesthetist. E. Metzenbaum, Cleveland.
71 Practical Treatment of Hemorrhoids. W. Teachnor, Columbus.
72 Phases of Automatism in Epilepsy. W. H. Pritchard, Gallipolis.
73 Thoughts on Dermatology. D. Moury, Bellefontaine.
74 Advantages of the Submucous Incision for the Reduction of Hypertrophied Turbinals. C. P. Linhart, Columbus.

Southern Medical Journal, Nashville

March

75 *Two Apparently New Physical Signs, Whereby Normal Organs may be Outlined and Diseased Conditions Diagnosticated, Particularly Within the Chest, by Means of Palpation. F. M. Pottenger, Monrovia, Cal.
76 *The Cancer Problem. R. Park, Buffalo.
77 Goiter. F. T. Meriwether, Asheville, N. C.
78 Pulmonary Tuberculosis—Its Care and Treatment. C. A. Robertson, Nashville.
79 Erysipelas. C. F. Anderson, Nashville.
80 *Ureterocystostomy—An Improved Technic—Case of Double Ureteral Implantation into the Bladder. J. W. Long, Greensboro, N. C.
81 Hematogenous Kidney Infections. A. F. Toole, Birmingham, Ala.

75. Published in the *Interstate Medical Journal*, December, 1909, *Southern California Practitioner*, December, 1909, and the *Lancet-Clinic*, Dec. 11, 1909.

76. Abstracted in THE JOURNAL, Jan. 15, 1910, p. 231.

80. **Ureterocystostomy.**—The method which Long regards as the simplest, and therefore the best, of doing an intra-abdominal ureterocystostomy is as follows: Make an incision of convenient length into the posterior wall of the bladder near its base. It is just as easy to sew up an incision one or two inches long, as it is to sew a half-inch incision, and, in fact, according to his experience, it is much easier. Besides, it gives one an opportunity of stitching the end of the ureter to the mucosa of the bladder and thereby do away with traction sutures. Long therefore makes an incision long enough so that he can work conveniently and quickly. The end of the ureter, cut tapering, is then introduced into the bladder a sufficient distance to be easily sutured by two fine catgut sutures to the mucosa a little way from the incision. The incision is then closed, and the intraperitoneal exposed portion of the ureter covered. The method was employed successfully in a case of carcinoma of the cervix uteri.

Chicago Medical Recorder

March

82 The Press in its Relation to Legislation for the Improvement of Charitable Institutions and Medical Reforms. F. Billings, Chicago.
83 The Press as a Public Educator in Medicine. W. Hutchinson, New York.
84 What May the Medical Profession Expect from the Press? S. Mathews, Chicago.
85 The Relation of the Press and Physicians to Departments of Health. W. A. Evans, Chicago.
86 Intra-oral Surgical Operations. T. W. Brophy, Chicago.

Yale Medical Journal, New Haven

March

87 *Osteitis Deformans. C. J. Bartlett, New Haven.
88 Poisoning Resulting from the Inhalation of Castor Pomace. S. B. Gilbert, New Haven, Conn.
89 A Simple Freezing Microtome Stage. W. E. Rounseville, Hartford, Conn.

87. **Osteitis Deformans.**—Bartlett reports a case showing gross involvement of the skull only (hyperostosis cranii). It appears to be unique among those reported that have come to autopsy, in that, although during life there was no evidence of the involvement of the long bones, microscopic examination of a portion of the femur removed at autopsy showed the early stage of such involvement. Also the condition of the pituitary gland found here is of interest from the etiologic standpoint. The enlargement of the head was in all diameters, but was most marked in the temporal regions, causing the upper parts of the ears to project prominently from the head. The measurements of the skull were: occipitofrontal circumference over glabella, 66 cm.; from glabella to inion along sagittal suture, 38 cm.; diameter from glabella to most posterior part of the head, 21.2 cm.; bitemporal diameter, 19.5 cm.

The anatomic diagnosis was diffuse hypertrophy and rarefaction of skull; enlarged pituitary gland; backward displacement of manubrium; moderate mitral stenosis with some replacement fibrosis of heart; beginning fatty degeneration of aorta and coronary arteries; bronchopneumonia with emphysema, edema, and chronic congestion of lungs; atrophy of gastric mucosa; chronic diffuse nephritis; bone marrow, red; and general muscular atrophy. From the autopsy findings it appears that the hypertrophy of the skull was almost entirely on its outer surface. Its cavity had not been encroached on by the thickened bone.

Journal Oklahoma State Medical Society, Muskogee

March

90 The Surgical Rôle of the Pneumococcus. A. L. Blesh and C. E. Lee, Oklahoma City.
91 Animal Heat. G. H. Thrailkill, Chickasha.
92 The Social Evil. M. A. Warhurst, Maud.
93 Infantile Eczema. C. R. Day, Oklahoma City.
94 Pelvic Drainage. G. H. Butler, Tulsa.
95 Retroperitoneal Shortening of the Round Ligaments. W. F. Dicken, Oklahoma City.

Journal of the Kansas Medical Society, Kansas City

March

96 Laboratory Methods Accessible to the Clinician. E. H. Schorer, Lawrence.
97 Muscular Atrophy. W. W. Yates, Topeka.

Surgery, Gynecology and Obstetrics, Chicago

March

98 *Gastrojejunal Ulcers (Pseudojejunal Ulcers). W. J. Mayo, Rochester, Minn.
99 *Excision of the Fat of the Abdominal Wall—Lipectomy. H. A. Kelly, Baltimore.
100 *Inflammatory Tumors of the Sigmoid. M. A. Myer, St. Louis.
101 Circumscribed Serous Meningitis of the Cord. J. C. Munro, Boston.
102 Pregnancy and Labor Complicated by Nervous Over-Development. F. S. Newell, Boston, Mass.
103 *Frequency of Congenital Sacs in Oblique Inguinal Hernia. W. Hessert, Chicago.
104 A New Operation for Arthritis Deformans and Certain other Deforming Affections of the Hip. F. H. Albee, New York City.
105 The Ferment and Antiferment Treatment of Suppurative Processes. E. Müller, Marburg, Germany.
106 *Five Hundred Cases of Diffuse and General Peritonitis Following Appendicitis. J. W. Kennedy, Philadelphia.
107 A Positive-Pressure Cabinet for Thoracic Surgery. S. Robinson, Boston.
108 Diverticulitis of the Sigmoid. J. H. Barbat, San Francisco.
109 *Surgical Treatment of Exophthalmic Goiter. F. C. Zapffe, Chicago.
110 Direct Implantation of Bone Grafts. C. C. Allison, Omaha.
111 Combined Transvesical and Extraperitoneal Method for Removal of Stones from the Lower end of the Ureter. M. Ballin, Detroit.
112 *Operative Technic of Vaginal Hysterectomy for Prolapsus. T. S. Cullen, Baltimore.
113 Improved Technic for Removal of Collapsed Vulvovaginal and other Cysts and Hernial Sacs. A. J. Schoenberg, Chicago.
114 A New Device for Supporting the Arm. A. B. Eustace, Chicago.
115 An Aid to Vessel Suturing. S. Bunnell, San Francisco.

98. **Gastrojejunal Ulcers.**—The total number of operations performed on the stomach and duodenum up to Dec. 31, 1909,

done by C. H. and W. J. Mayo, was 1,775. Of these, 1,141 were gastrojejunostomies. In 715 cases the operation was for duodenal and gastric ulcer, in 167 cases for cancerous obstruction at the pylorus, and 259 were in connection with partial gastrectomy. The majority of the latter operations were for malignant disease. Of the whole number, not a single patient developed true jejunal ulcer; nor have any such cases come to the Mayos in which gastrojejunostomy had been performed by other surgeons. They report 3 cases corresponding to the gastrojejunal or pseudojejunal type of ulcer.

99. **Excision of Fat of Abdominal Wall.**—Kelly says that it is easy to see how much tissue ought to be removed by pulling the mass up and away from the body. An incision above and below on the pendulous mass made a little above the lines of deflection will remove enough and yet leave enough skin for approximation. With a little practice, the surgeon will be able to decide this with his eye as the patient lies on the back on the table, or if he is uncertain he may cut across the abdomen below from side to side and then cautiously carry the upper incision from side to side, measuring with the eye and testing the mobility of the tissues above to see that they will slide down to meet the lower flap. This dissection can be made very rapidly. All hemorrhage must be checked; deep vessels must be caught as they come out of the fascia and ligated with catgut. The incision must be carefully covered with hot gauze while operating, and the incision sloped a little inward so that apposition will be perfect. All vessels are tied with fine catgut; the fat sewn together with catgut and the skin with silkworm gut and horsehair. At either end of the incision a small cigarette drain of rubber protective tissue is inserted. The dressing is with silver foil and sterile gauze. These wounds, in spite of their immense size, heal promptly, and there is practically no postoperative discomfort.

100. **Inflammatory Tumors of the Sigmoid.**—Myer describes a primary, circumscribed, inflammatory tumor of the sigmoid, benign in its pathologic findings, but demanding radical treatment on account of a great deal of pain in the left side; a bloody discharge from the vagina; very severe constipation; at time the passing of gas, and painful stools.

103. **Congenital Sacs in Oblique Inguinal Hernia.**—Hessert claims that the chief etiologic factor underlying the development of oblique inguinal hernia in fully three-fourths of the cases can be traced to the pre-existence of a congenital sac, the result of faulty closure of a part or the whole of the vaginal process. This proposition has been sustained in the last 100 operations in Hessert's practice.

106. **Diffuse and General Peritonitis.**—In the 500 cases of diffuse or general peritonitis reported by Kennedy, there were 9 deaths. This includes the deaths in the hands of several assistants. In 124 of these cases the incision was in the median line for a general peritonitis with distention. In the remaining cases with a diffuse peritonitis, the toilet was always proportionate to the extent of involvement of the peritoneum. Three of the deaths were in patients over 70. One of the patients died one hour after the operation. This patient went on the table with a subnormal temperature of 96 degrees. Another patient lost was a vigorous man with cecum and appendix on the left side. The appendix was gangrenous and retrocecal. The error in this case was that Kennedy made the incision on the right side. It should have been in the center. The toilet of the left side would have been better and should have saved this patient; as it was, he died with symptoms of retroperitoneal infection.

All patients had the open treatment, not a stitch in the abdomen and the cofferdam drain. The Fowler position was not used in any case; in fact, the reverse position was used, the foot of the bed being elevated in the worst conditions. This position was not used with the idea of increasing or decreasing absorption, but to place the patient in the best position to resist shock of operations. Proctoclysis was not consistently used, but Kennedy has no objection to its use.

109. Published also in *Illinois Medical Journal*, March; see abstract No. 139.

112. **Vaginal Hysterectomy for Prolapsus.**—In cases in which there is a marked prolapsus of the uterus associated with much redundancy of the anterior and posterior vaginal walls and occasionally with a greater or less amount of ulceration, vaginal hysterectomy, combined with a wide removal of the surrounding vaginal mucosa, closure of the vaginal vault and repair of the perineum is the operation performed by Cullen. He outlines the area to be removed at the commencement by cutting just through the vaginal mucosa downward from the bladder, entering Douglas' cul-de-sac behind, in order that he may get his bearings, removes the uterus and joins the vaginal mucosa to the peritoneum of Douglas' pouch. The peritoneum of the anterior pelvic wall is then sutured to that of the posterior wall, and in this way the pelvis is completely shut off.

Iowa Medical Journal, Des Moines

March

116 *Blennorrhea Neonatorum—Cause, Prevalence and Prophylaxis. L. W. Dean, Iowa City.
117 *The Cost of Ophthalmia Neonatorum in Iowa. A. R. Amos, Des Moines.
118 *The Practical Aspects of Prevention of Ophthalmia Neonatorum. R. M. Lapsley, Keokuk.
119 Morbid Worry. W. J. Egloff, Mason City.
120 *Early Diagnosis of Diseases of Children that lead to Deformities. F. Mueller, Chicago.
121 Cholangeitis. N. Schilling, New Hampton.
122 Cholecystitis. S. T. Gray, Albia.

116, 117, 118, 120. Abstracted in THE JOURNAL, July 17, 1909, pp. 229, 230.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

March

123 *Cerebrospinal Meningitis in an Infant Two Months Old: Diagnosis made by Tapping the Lateral Ventricles; Treatment by Intraventricular Injections of Flexner's Antimeningitis Serum; Recovery. L. Fischer, New York.
124 Lithia Waters as Therapeutic Agents. H. Leffmann, Philadelphia.
125 Tonsillar Hypertrophy. R. B. Scarlett, Philadelphia.
126 Joint Conditions Causing Pensionable Disabilities. J. T. Rugh, Philadelphia.
127 *The Coal-Tar Derivatives versus Opiates. C. E. deM. Sajous, Philadelphia.

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derivatives that although they relieve pain they do not produce sleep. In the first place, this is an error; they do induce somnolence, though this is much less marked than when opiates are used. But even were it true—nothing prevents the simultaneous use of safe advantages in their employment concomitantly, since the dose of either agent can be made smaller. Summarizing all these facts, it seems plain, Sajous says, that far from being harmful in the hands of the profession, the coal-tar derivatives have furnished the only means to avoid the use of the opiates.

Old Dominion Journal of Medicine and Surgery, Richmond

March

128 Appendicitis in Children. J. M. T. Finney, Baltimore.
129 Pityriasis Rubra Pilaris in a Negro. W. L. Gatewood and J. C. Bardin, Petersburg.
130 Pulmonary Tuberculosis—Its Early Diagnosis and Subsequent Management. W. D. Tewksbury, Catawba, Va.
131 Successful Enucleation of a Meningeal Endothelioma Involving the Motor Cortex. S. H. Watts, Charlottesville, Va.
132 Peroneal Palsy of Obstetric Origin. A. Gordon, Philadelphia.
133 The Life and Work of Andreas Vesalius. D. K. Shute, Washington, D. C.

Detroit Medical Journal

March

134 Infectious Foci of the Mouth, Nose and Throat. H. L. Begle, Detroit.
135 Chemical Therapeutics. F. T. F. Stephenson, Detroit.
136 Chorea. A. D. Potter, Detroit.
137 Syphilitic Arthropathies. N. E. Aronstam, Detroit.

Illinois Medical Journal, Springfield

March

138 Surgical Aspects of Exophthalmic Goiter. A. H. Ferguson, Chicago.
139 *Surgical Treatment of Exophthalmic Goiter. F. C. Zapffe, Chicago.
140 *Medical Treatment of Exophthalmic Goiter. M. M. Portis, Chicago.
141 *Treatment of Exophthalmic Goiter with Serum of Thyroidectomized Animals. S. Krumholz, Chicago.
142 Organotherapy: Historical Review and Critique. A. C. Croftan, Chicago.
143 *Adrenal Therapy. C. E. deM. Sajous, Philadelphia.
144 Orchitic and Ovarian Therapy. G. Schmauch, Chicago.
145 Thyroid Therapy. J. B. Herrick, Chicago.
146 Medical Inspection of Public School Children. G. W. Rice, Champaign.

139. **Surgical Treatment of Exophthalmic Goiter.**—It is held by Zapffe that any one who has had an opportunity to observe the results which follow the surgical treatment of exophthalmic goiter must confess that it is the best treatment for this disease in nearly every case, although not every case of exophthalmic goiter is suitable for surgical treatment. Most authorities are agreed that in cases in which surgery has failed to produce good results it was not the fault of the operation, but the fault of too late an operation being performed. Surgical treatment should not be considered a last resort, but should be looked on in the same manner as the medical treatment is regarded—as a form of treatment, and not as the last thing to be attempted, in the hope of giving the patient relief. An early operation, a careful operation, done by an experienced operator, and not by an occasional operator, are essential to success.

140. **Medical Treatment of Exophthalmic Goiter.**—Surgery, says Portis, has demonstrated more brilliant results than medicine so far. But not all cases are surgical. The mild cases, the patients with acute symptoms, the advanced cases with cardiac degeneration, the patients who although operated on have not improved, all these should be treated medically. The internist should not temporize with patients who resist medical measures or those who relapse of acute symptoms. These cases are surgical, and the patients should be operated on when the acute symptoms are under control and before they have gone too far as chronic cases. Then, and then only, will the unusual mortality be improved.

141. **Serum Treatment of Exophthalmic Goiter.**—It is Krumholz's opinion that this serum is the most valuable drug as yet offered. In most cases nearly the whole symptom-complex is ameliorated. The subjective symptoms subside. The tremor and nervousness diminish, and the nutritional disturbance is markedly lessened. In some cases the thyroid gland is reduced in size and occasionally the exophthalmos recedes. The tachycardia is reduced more promptly and effectively with the serum than with any other therapeutic agent. Taking the 14 cases under his observation as a basis for computation, the ailment did not recur in 2 cases after a lapse of several years, equaling 14.3 per cent.; marked improvement resulted in 42.8 per cent.; slight improvement in 35.6 per cent. In one case, or 7.1 per cent., there was no response to treatment. After treatment had ceased, relapses occurred in 5 cases after periods of 9, 8, and in the last three, 6 months, respectively. These figures seem to indicate that the serum has an accumulative action like iodothyrin, and, in order to secure permanent relief, should be administered at intervals. It is interesting to note that after the first few days of the serum treatment the pulse rate increased in 5 cases and the weight decreased in 5 cases. Krumholz emphasizes that to secure favorable results it is essential to reach and maintain a point of neutralization and then approximate the doses in each case, for the reason that small doses have no marked beneficial effect, while an excessive quantity aggravates the condition. There is no standard dose. The usual maximum dose administered in Krumholz's series of cases consisted of 120 drops of the liquid or 60 grains of the desiccated serum.

143. Published in the *Monthly Cyclopedia and Medical Bulletin*, February, 1910, and the *Interstate Medical Journal*, February, 1910; abstracted in THE JOURNAL, March 19, 1910, p. 1010.

Western Medical Review, Omaha

March

147 Bacteriology of Acute Infectious Diseases of Bone. H. N. Waite, Lincoln.
148 Surgical Treatment of Rachitic Deformities. H. W. Orr, Lincoln.
149 *Constitutional Diseases of Infancy Leading to Bone Deformity. H. M. McClanahan, Omaha.
150 When to Operate in Bone Tuberculosis. D. T. Quigley, North Platte, Neb.
151 Law Enforcement. F. L. Wilmeth, Lincoln.
152 *The Application of Business Methods to the Practice of Medicine. F. A. Long, Madison, Neb.

149, 152. Abstracted in THE JOURNAL, Nov. 20, 1909, p. 1762.

Denver Medical Times and Utah Medical Journal

March

153 *Arms of Precision. W. Stuver, Fort Collins, Colo.
154 Typhoid Report for Greeley, Colo., 1909. C. B. Dyde, Greeley, Colo.
155 The X-Ray in Diagnosis of Renal, Biliary, and Vesical Calculi. S. B. Childs, Denver.
156 Winter Remedies. G. L. Servous, Fairview, Nev.
157 A Bipolar Intragastric Electrode. A. G. Hurdman, Denver.
158 Preventive Medicine. E. V. Silver, Salt Lake City.

153. Abstracted in THE JOURNAL, Nov. 27, 1909, p. 1844.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

March 26

1 *Angina Pectoris (continued.) W. Osler.
2 *Treatment of the Surgical Forms of Tuberculosis by Tuberculin. N. Raw.
3 The Abdominal Watersheds and their Influence on the Localization of Intraperitoneal Infections. C. R. Box.
4 *Treatment of Psoriasis. E. G. G. Little.
5 Case of Heart Block. J. G. Emanuel.
6 The Antituberculosis Campaign in London. D. J. Williamson.

1. **Angina Pectoris.**—The following explanation of the pain in angina pectoris is given by Osler: Angina results from an alteration in the working of the muscle fibers in any part of the cardiovascular system whereby painful afferent stimuli are excited. Cold, emotion and toxic agents interfering with the orderly action of the peripheral mechanism, increase the tension in the pump walls or in the larger central mains, causing strain, and a type of abnormal contraction enough to excite in the involuntary muscles painful afferent stimuli. In stretching, in disturbance of the wall tension at any point, and in a pain-producing resistance to this by the muscle elements, lie the essence of the phenomena. In a man with arteriosclerosis and high pressure, and all the more likely if he has a local lesion, a syphilitic aortitis for example, disturbance at any point, of

the tension of the wall permits the stretching of its tissues. Spasm or narrowing of a coronary artery, or even of one branch, may so modify the action of a section of the heart that it works with disturbed tension, and there are stretching and strain sufficient to arouse painful sensations. The heart may be in the same state as the leg muscles of a man with intermittent claudication working smoothly when quiet, but instantly an effort is made or a wave of emotion touches the peripheral vessels, anything which heightens the pressure and disturbs the normal contraction, brings on a crisis of pain.

2. **Tuberculin Treatment of Surgical Tuberculosis.**—Sixty-one cases of tuberculous glands in the neck and elsewhere have been treated by Raw with human tuberculin with astonishing and excellent results. He is strongly averse to extensive dissections in the neck with the object of clearing out all tuberculous glands. He advises that caseating or suppurating glands should always be opened or removed as they are a source of danger, but states that the glands which are now caseating will nearly always disappear after a course of 12 or 15 injections of tuberculin. Raw looks on glands in the neck as the most favorable lesions for treatment with human tuberculin. He has treated 17 patients with tuberculous salpingitis with injections of Koch's tuberculin having previously had the tubes removed by operation. Several of the women have been completely cured, with increase of weight and loss of all symptoms, although in 5 cases the bladder was involved. Tuberculosis of the genitourinary apparatus seems to respond well to tuberculin treatment, and of 26 patients 14 seemed to receive lasting benefit, while 12 progressed. Many of these cases were advanced, but in early cases the individuals respond well to treatment. A tuberculous testicle should always be removed, says Raw, as by remaining it is liable to be followed by acute generalized tuberculosis. Tuberculous kidneys should not be removed unless suppuration is present, as they improve and often remain useful organs after tuberculin treatment. Tuberculous ulcers in the bladder are often very intractable, and may require some surgical interference as well as tuberculin, but they sometimes heal altogether without operation.

4. **Treatment of Psoriasis.**—Of all the local applications employed in psoriasis, Little holds that none can compare in efficiency with chrysarobin added to a fairly adhesive ointment base, such as the following:

	gm. or c.c.		
Kaolin	8		3ii
Starch			
Lanolin, āā	16	or	3iv
Paraffin, fluid	8		3ii
To this is added chrysarobin	1-2		gr. xv-xxx

The ointment thus resulting may be applied to the face and the forehead where the hair joins the skin—a very frequent position for obstinate patches of the disease. It should be used at night and removed in the morning either with petrolatum or with benzen: the latter is especially useful on hairy parts, and all trace of the ointment should be removed before washing the parts with soap, which in combination with chrysarobin, produces purple discoloration of the hair. The patient must be warned of the danger of conjunctivitis from contact of the conjunctiva with chrysarobin. On the hands the most convenient covering is a pair of cotton gloves, which may be used again and again. The more the ointment soaks into the glove, the more efficacious it becomes. On the covered parts of the body the adhesive ointment mentioned can be left *in situ*, and the proportion of chrysarobin increased to half a dram to the ounce; it will not come off with mere rubbing, so that the bath need not be prohibited.

British Medical Journal, London

March 26

7 Epilepsy. W. A. Turner.
8 *Optic Neuritis and Suppurative Otitis. J. S. Barr and J. Rowan.
9 *Scopolamin-Morphin Narcosis. R. H. Jamieson.
10 Death Under Spinal Anesthesia by Jonnesco's Method in Acute Intestinal Obstruction. F. V. Milward.
11 Hemopneumothorax without Traumatism: Recovery. R. B. Ness and G. A. Allan.
12 Acute Tuberculous Bronchopneumonia after Gastroenterostomy. W. A. Mackay, I. MacDonald and H. G. Sutherland.
13 *A Typhoid Bacillus-Carrier. J. R. Hutchinson.
14 Syphilitic Leucoderma in a Male. K. H. Jones.
15 Relation of the Parovarium to Cyst Formation. P. P. Cole.
16 Electrocardiographic Curves Yielded by Ectopic Beats Arising in Walls of the Auricles and Ventricles. T. Lewis.

8. **Optic Neuritis and Suppurative Otitis.**—The conclusions arrived at by Barr and Rowan are founded on the examination of the eyes and ears of 160 patients. When possible, each individual has been kept under observation until the termination of the ear affection in recovery, either as the result of local treatment or after operation. Barr and Rowan found that apart from optic neuritis, vascular changes of a lesser degree are frequent (39 times in 160 cases, or about 25 per cent.). Cases of purulent middle-ear disease, in which optic neuritis or vascular engorgement of the fundus is present, are much less amenable to local treatment than those in which the fundus is normal. As a general rule, an improvement in the eye condition is accompanied by improvement in the aural condition, while an increase in the intensity of the changes in the fundus or their persistence is associated with less amenability to treatment and greater gravity of the ear condition. The most probable cause of vascular engorgement of the fundus or optic neuritis is serous meningitis (diffuse or localized). Optic neuritis caused in this way is not usually followed by atrophy, and unless there are other symptoms demanding it, opening of the dura mater is unnecessary.

The practical lessons deducible are: (1) a case showing these changes in the fundus should be watched closely, and their existence regarded as an additional reason for the early performance of the radical mastoid operation; (2) if, on the other hand, they show a tendency to clear off, especially with improvement in the ear condition, or if the fundus is normal to begin with and remains so, we may, with more confidence, look for a favorable response to conservative treatment. Barr and Rowan plead for a more systematic general use of the ophthalmoscope in cases of purulent disease of the middle ear, as they are convinced that the trouble involved will be more than repaid by the results, both as regards the progress and prognosis of this disease.

9. **Scopolamin-Morphin Narcosis.**—In the course of some pharmacologic experiments with scopolamin and morphin, Jamieson found in animals certain effects produced on the respiration similar to those which sometimes attend the clinical use of scopolamin and morphin as an anesthetic. Clinically, one meets with those apparently alarming cases in which the respiration is greatly reduced, to 5 or 6 a minute, and Jamieson's work shows the clinical importance of artificial respiration in cases of an overdose of scopolamin and morphin; and this artificial respiration, combined with drugs which stimulate the respiratory centers, such as strychnin, seems to offer the most logical method of treatment in cases of an overdose.

13. **A Typhoid Bacillus Carrier.**—The only factor common to seven cases reported by Hutchinson is the presence of the lodging-house keeper. No history of contact with known enteric fever cases, or of consumption of food likely to be infected was obtainable in any of these cases. The lodging-house keeper's medical history is as follows: Up to 1893, when she was about 54 years old, she enjoyed good health. In this year she had an attack of "influenza and pneumonia," for which she was treated in a hospital. She remembers little about this illness, except that she had severe headaches and pain in the back and was delirious. She was ill for 5 weeks and was fed entirely on fluid foods. Since this illness she has suffered from periodic attacks of abdominal pain and vomiting. These attacks did not follow immediately on the illness of 1893; there was an interval of 5 years during which her health was good. A specimen of blood obtained in November, 1907, gave a negative reaction. On Nov. 4, 1908, her blood gave a positive reaction in 30 minutes. Feces and urine contained typhoid bacilli. Hutchinson deems it highly probable that the combination influenza and pneumonia of 1893 was in reality enteric fever. It is remarkable that she was not known to have infected any one prior to 1898, particularly so as she was engaged in general housework, including the preparation of food, etc., for her lodgers. Certainly her attacks of abdominal pain, etc., do not seem to have troubled her prior to the middle of 1898. The cases reported occurred in 1898 (1), 1905 (2), 1906 (2), 1907 (1), and 1908 (1).

Medical Press and Circular, London

March 9

17 Gonorrheal Retro-ocular Neuritis and Myelitis. W. Gowers.
18 *The Cerebellum and its Diseases (continued). J. S. R. Russell.
19 Treatment of Acute Peritonitis. J. M. Paton.
20 Coxa Vara. J. S. Darling.
21 Etiology, Prophylaxis and Treatment of Cerebrospinal Meningitis. H. de Meric.

March 16

22 Nasal and Aural Hemorrhage; Three Causes and Treatment. A. Wylie.
23 Curettage of the Uterus. S. G. Kirby-Gomes.
24 Treatment of Labor in Contracted Pelvis: Especially Justifiability of Pubiotomy. G. F. Blacker.

18. Published in the *British Medical Journal*, March 12, 1910.

Clinical Journal, London

March 9

25 Exophthalmic Goiter. W. P. Herringham.

March 16

26 *Question of Position and Early Movement after Abdominal Operations. C. M. Moullin.
27 Degeneration of the Spinal Cord. J. A. Ormerod.
28 Cancer. F. M. Sandwith.

26. **Position and Early Movement After Abdominal Operations.** Whether or not patients after abdominal operations should be allowed to get up sooner than is the custom at present is a question well worth considering. Moullin is strongly disposed to believe that we are still too much tied down in this respect by the traditions of the old, bad system of septic surgery with its suppurating wounds. He agrees that when a wound is full of pus no relaxation can be allowed, but aseptic wounds are a new development and must be judged by totally different standards. So far as these are concerned, it is time, he declares, that we discard ancient authority and think out the matter for ourselves. In the first place, a clear distinction must be drawn between allowing a patient to be lifted quietly out of bed and placed in a comfortable chair with abundance of cushions and pillows for a few hours each day, for the sake of having his meals in comfort or for other reasons, and letting him get up and get about by himself, doing whatever he thinks fit. The latter is decidedly not recommended by Moullin, if for no other reason than that it is impossible to guarantee the patient against accidents.

So far as voluntary movements are concerned, the test when a patient may be allowed to control his own actions is a simple one. Moullin has adopted it for many years past and is perfectly satisfied with it. He makes the patient, while lying in bed, put the muscles that have been divided into action, and he does not give him his freedom until the scar definitely sinks in when this is done. He takes the sinking-in to mean that the lymph which has been effused has by this time become organized, so that, provided the patient is reasonably careful, it will stand ordinary work. He sees no reason why a patient whose wound is running an aseptic course should not be raised and lifted out of bed by trained nurses the next day, if it is thought desirable. The actual choice of position may be left to the patient. Comfort is the best guide. No position which throws the least strain on the wound can be comfortable for long.

Australasian Medical Gazette, Sidney

January

29 Eugenics in the Light of Higher Civilization. G. L'Estrange.
30 Complement Deviation in Hydatid Disease. J. F. Flashman and A. G. Butler.
31 *Possibility of Treating Leprosy with Bactericidal Drugs. L. E. Row.
32 Brophy's Operation for Complete Cleft Palate. T. Fiaschi.
33 The Mayo Brothers' Clinic: Special Reference to Open Method of Ether Administration. G. Craig.
34 Life History of Hydatid Cyst. W. R. C. Mainwaring.
35 Cutaneous Reaction of von Pirquet in Diagnosis of Tubercle. E. A. Briummit.
36 Camphor-Carbolic Acid as Direct Antiseptic Application to Ulcerated Surface. J. B. Cleland.
37 *Treatment of Epistaxis by a Simple Method. J. Boyd.

31. **Bactericidal Drugs.**—For nearly 3 years Row has been experimenting with guaiacol, and finds, he says, that it has the power of destroying the *Bacillus lepræ*, causing reactions more or less pronounced according to the dose given. In mild cases the patients can take as much as 12 minims, 3 times a day, by the mouth, without any sign of suppuration occurring, but if a similar dose be given in advanced cases, extensive suppuration will result. Care must be taken to accustom the patient to it gradually, and no more than 4 or 5 minims, 3 times a day, should be given for the first 2 or 3 months. At the end of this time the dose can be gradually increased by 2 minims at a time till the maximum dose is reached—say from 12 to 14 minims, 3 times a day. In advanced cases of nodular leprosy no more than 15 minims a day should be given, but in mild cases up to 36 or 40 minims a day can be given with safety, under careful supervision. Should suppuration occur, however, the dose must immediately be reduced. When a patient suffering from nodular leprosy is placed under the guaiacol treatment (5 minims, 3 times a day) for the first week or two he will complain of vertigo occasionally, but this will gradually wear off, until the dose is increased, when he will again suffer more or less from it. As the patient gradually becomes used to the drug an increase in dose will not produce this symptom, as a rule.

When the patient has been under treatment for 6 or 8 weeks a considerable improvement will be noticeable in the general health, but no change takes place in the tubercles for about 4 months. At the expiration of this time, however, the tubercles become softer in the center, and absorption commences. This is a slow process, but it is progressive, and in the course of a few months a considerable diminution in the size of the tubercles can be noticed. Row has tried this treatment on over 50 patients, for variable periods, in all stages of the disease, and states that there has been distinct improvement in every one, so long as the patient persevered, but retrogression occurred when the use of the drug was discontinued. In the most advanced cases the improvement was slight, but it has been very marked in those patients who have not reached such an advanced stage of the disease that their resisting forces have been more or less destroyed. Out of 31 patients who persevered with the treatment, 3, at least, have advanced toward recovery to such an extent that it is extremely difficult to obtain evidence of the existence of bacilli in specimens taken from them, and even when such bacilli are found they are not normal. These 3 patients, he asserts, are in the best of health and never have the least sign of fever, pain or malaise.

37. **Treatment of Epistaxis.**—Boyd describes his method as follows: Take a piece of fine starched muslin from 5 to 6 inches square. Impinge the points of a closed dressing forceps—a thin penholder will do—in the center, and pull the muslin over the forceps, forming a closed umbrella appearance with the forceps forming the handle. This is passed through the nostril until it comes in contact with the posterior nasopharyngeal wall, when the forceps is withdrawn. The ends of the muslin are now spread over the face and held in place by the fingers of the left hand, and the hollow cone left is rapidly plugged from behind forward with small pieces of cotton wool soaked in any available styptic, *i. e.*, vinegar, as firmly as is thought desirable; the projecting ends of the muslin are trimmed off, and the little operation is completed easily in a couple of minutes. The second nostril is similarly dealt with if necessary. If it be not necessary to plug the post-nasal fossa (doing the latter will almost invariably leave temporary deafness), the muslin cone, after withdrawal of the forceps, can be pulled forward to clear the posterior wall of any pressure before the plugs are introduced. The muslin should not be moistened, and the little plugs should be rapidly introduced before the cone gets flabby with moisture, as they slip in so much more easily.

Dublin Journal of Science

March

38 Treatment of Syphilis by Intramuscular Injections of Mercury. G. S. Walton.
39 Duodenal Ulcer. M. K. Acheson.
40 *More About Medical Education. W. H. Thompson.

40. **Medical Education.**—The chief points contended for by Thompson may be summarized as follows: The teaching given in the laboratories of medical schools has a direct or clinical bearing to a greater degree than is generally recognized. The standard in anatomy and physiology is not higher now than it was during the four-year curriculum. The dissatisfaction on the part of the hospital with the present state of affairs has chiefly arisen from a normal development—namely, the natural growth of laboratory instruction—in accordance with the recent progress in medicine. It would be unwise to check this growth, and the hospital would benefit by providing

greater facilities for utilizing to a fuller extent the laboratory teaching given to the students. The hospital would gain by adopting a more developed class system and enforcing a more regular attendance. The changes in the medical curriculum commonly suggested by clinical teachers—namely, the exclusion of botany and zoology, together with the proposal to reduce anatomy and physiology, and confine them to the first two years, Thompson thinks, would entail a postponement of hospital work till the third year or even later in the case of students who fall behind. The compression of work into the early years of the curriculum, coupled with the relegation of the final examinations to the end of the fifth year, would leave the third and fourth years very light, and he thinks, would not help the student.

Archives Générales de Chirurgie, Paris

February, IV, No. 2, pp. 111-220

41 *Osteoma of the Brachialis Anticus. Vandenbossche.
42 *Arthritis due to the Sporothrix. (Arthrites sporotrichosiques.) P. Moure.
43 *Metal Bracelet for Fixation of Stumps after Fracture of the Radius. (Ostéosynthèse de la diaphyse radiale avec une bague métallique amovible.) Mauclaire.

41. **Osteoma of the Brachialis Anticus.**—Vandenbossche gives the details of 4 cases from his experience, the lesion developing after luxation and fracture or separation of the epiphysis. Spontaneous retrogression during immobilization may occur as in two of his cases. Immobilization, he declares, is important from the standpoint of prevention in all cases of dislocation of the elbow. If the osteoma involves the joint, operative treatment must be that for ankylosis in general. Time aids in the cure of an osteoma and surgical measures, he states, should not be instituted for at least a year after development of the lesion, and then only when there is important functional impotency.

42. **Arthritis Due to the Sporothrix.**—Moure reports a case in which a serious joint affection commenced with accumulation of fluid in the joint, assumed to be of syphilitic origin, this diagnosis being confirmed by the benefit at first under mercury and iodid treatment. The lesion continuing to progress, a cold abscess developed below and the diagnosis was changed to tuberculosis as there was nothing in the history of the case so far to indicate a mycosis. But when the abscess perforated outward and the germs gained access to the lymphatics, 28 subcutaneous nodules developed along their course. The sporothrix was cultivated in pure cultures and no signs of tuberculosis developed in animals inoculated with material from the lesion. The findings in the case are illustrated and compared with 2 similar cases on record. Moure has also found the sporothrix present in 4 out of 36 cases of various surgical affections during the last 18 months, and he is convinced that systematic search for this germ would elucidate many puzzling surgical lesions and enable a prompt cure under potassium iodid. When the lesion is advanced, the sporothrix may have been killed off by its own products or by secondary infection, but the nature of the process can be readily differentiated by the fixation of complement test and sporoagglutination or still more easily by tentative administration of potassium iodid. He is convinced that many patients who now drag from hospital to hospital on account of closed or open subacute or chronic osteoarthritis, could be promptly cured if this were done.

43. **Bracelet Clamp in Treatment of Fracture of the Radius.**—Mauclaire describes the methods in vogue for coaptation of the stumps in fracture of the radius when there is a marked tendency for the stumps to deviate toward the ulna and comments on the drawbacks of the various methods. He then describes a broad metal bracelet which he applies to the bone and which holds the stumps in the correct position by means of an inner shell which is forced firmly down on the bone by a thumbscrew.

Bulletin de l'Académie de Médecine, Paris

March 15, LXXIV, No. 10, pp. 261-291

44 *Tumor of the Pineal Gland in Children. F. Raymond and H. Claude.

44. **Tumor of the Pineal Gland in Children.**—Raymond and Claude report a case which seems to demonstrate that it may be possible to differentiate early a tumor in the pineal gland and thus permit its removal in time. This is also shown by 5 other cases in children that have been reported in detail in recent literature. Besides the signs of extreme hydrocephalus, the syndrome includes indications of defective or exaggerated functioning on the part of several of the glands with internal secretion. The location of the pineal body commanding the blood vessels that drain the central regions of the brain explains, he says, the liability to sudden and extreme hydrocephalus. In the case described the tumor in the pineal body had been diagnosed during life. The first symptoms in the patient, a boy of 7, were headache on the right side, radiating to the eye, nose and upper jaw on the same side; when the attack of headache was very severe, there was liable to be vomiting. A tooth was pulled, and quinin was given, and the attenuation of the disturbances seemed to coincide with this treatment. A year later the attacks returned and the child who had been growing normally hitherto became quite obese and too weak to walk; vision became poor, and the eyeballs deviated toward the right; quinin, mercury and iodid gave no relief, but some benefit followed three lumbar punctures. By the end of the second year amaurosis was complete and another lumbar puncture had a disastrous effect, being followed by intense headache, vomiting, general depression and absolute gastric intolerance. Some improvement was evident after three months, but the child was too weak to walk. The hair on the pubis was developed like that on a youth of 15 and there was down on the upper lip and cheeks, but the genital organs were undersized. The child died in coma three years after the first symptoms and autopsy revealed a gliomatous tumor in the region of the pineal gland with atrophy of the hypophysis.

Bulletin de la Société de Pédiatrie, Paris

February, XII, No. 2, pp. 85-127

45 *Oiled Silk in Treatment of Edema and Sclerema in New Born Infants. (Traitement de l'œdème et du sclérème idiopathiques des nouveau-nés débiles par l'enveloppement dans le taffetas gommé.) H. Dufour.
46 *Joint Tuberculosis with Valvular Lesions. (Note sur les arthropathies tuberculeuses, avec lésions valvulaires du cœur.) M. H. Barbier.
47 Cricotracheal Stenosis Following Intubation. (Trois cas de laryngostomies pour sténoses cicatricielles cricotracheales ayant nécessité la trachéotomie.) M. Guisez.
48 Radioscopy in Pneumonia in Children. (Le triangle axillaire de la pneumonie infantile. Etude de radioscopie clinique.) E. Weill and G. Mouriquand.

45. **Oiled Silk in Treatment and Prevention of Idiopathic Sclerema and Edema in the New-Born.**—Dufour treats prematurely born infants with a tendency to sclerema or edema by wrapping them in oiled silk instead of putting them in an incubator. Since he adopted this method of treatment two years ago these two syndromes have entirely disappeared from his service. The aim is to keep in the child's heat, and the infant is wrapped completely in the oiled silk, only its head protruding, as it is the excessive loss of heat by these weakly prematurely born infants, he says, which leads to production of the sclerema and edema. Tibone has also recommended the use of oiled silk but he merely wraps the limb affected with the sclerema with cotton with oiled silk or rubber tissue outside, the aim being thus different from Dufour's total pack.

46. **Tuberculous Arthropathies with Valvular Disease of the Heart.**—Barbier calls attention to a syndrome in which the symptoms seem to indicate rheumatism but they develop into a tuberculosis syndrome in time. In the case first described a girl of 15 had had recurring attacks of this tuberculous rheumatism, the knee, hip and shoulders being extremely painful and the patient shrinking from the slightest movement of the limb involved; there was no redness, edema or swelling of the joint. A concomitant chronic endocarditis was probably of the same tuberculous nature. The patient finally succumbed to rapid involvement of the lungs, four years after the first symptoms. In the second case the patient was a girl of 13 with pain in the right knee and hydrarthrosis, the disturbances subsiding and returning at intervals during the year and at last involving several joints with signs of a mitral lesion and of an apical process. The intradermal tuberculin test elicited a positive response, but under sanatorium treatment the joint disturbances rapidly and entirely retrogressed and the general condition improved.

Presse Médicale, Paris

March 16, XVIII, No. 22, pp. 185-192

49 Relations between the Nasal Mucosa and the Genital Apparatus. (Relations entre la muqueuse du nez et l'appareil génital de la femme.) G. Mahu.
50 Insoluble Radium Salts in Therapeutics. (Des sels de radium insolubles en thérapeutique.) H. Dominici.

Semaine Médicale, Paris

March 16, XXX, No. 11, pp. 121-132

51 *Six New Signs of Organic Hemiplegia. J. Lhermitte.

March 23, No. 12, pp. 133-144

52 Medicopsychologic Study of Intellectual Superiority. (M. Henri Poincaré.) E. Toulouse.
53 Treatment of Fat Embolism by Temporary Drainage of the Thoracic Duct. (Traitement de l'embolie graisseuse par le drainage temporaire du canal thoracique.) M. Weinberg.

51. **New Signs of Organic Hemiplegia.**—Lhermitte comments on six new signs that have been recently discovered as showing that hemiplegia from some organic cerebral cause is far from being of as simple origin as previously imagined. The evidence of hypertonicity with the organic form and its constant absence in hysteric paralysis confirms the difference in their mechanism. Claude has recently called attention to a sign of curable organic hemiplegia, in that the paralyzed member may make spontaneous movements in response to stimulation of the skin or muscle. In three cases of complete cerebral paralysis of the arm, the hand and fingers became flexed or the arm bent up when the skin was pinched or the arm was suddenly turned. Similar movements could be induced in the paralyzed leg by pinching the skin of the outer aspect of the thigh. The foot could be flexed by pinching the muscle in the thigh. In all these cases in which this automatic movement could be induced the hemiplegia subsided within a month after the apoplexy. Raimiste's hand sign was described in THE JOURNAL, March 12, 1910, page 871: If the forearm and hand are placed vertically on a table and the supporting hands are suddenly withdrawn, the wrist drops with cerebral hemiplegia while the hand retains its vertical position under other conditions. The same writer has also called attention to a movement of abduction in the paralyzed leg when the patient is directed to abduct the sound leg and the movement is suddenly prevented, the patient lying on a hard bed. The effort made is revealed in the movement of abduction on the part of the paralyzed limb, although the limb is incapable of making any spontaneous movement. This associated abduction or adduction is not observed in health nor in hysteric hemiplegia. Nëri has found that the leg presents a phenomenon similar to Raimiste's drop wrist or hand sign: With the patient reclining, the paralyzed limb becomes flexed when the leg is raised to form an angle with the plane of the bed of 50 degrees, while the sound leg can be raised to an angle of 75 degrees without flexing. The same phenomenon can be induced by having the patient bend over as he stands, the legs apart. As the trunk is held horizontal the paralyzed leg becomes flexed while the sound limb remains extended. This hypertonicity of the flexors of the limb can be made evident in the coma phase. Souque's sign is induced by passive raising of the arm. As it is raised the fingers become extended and spread apart like a fan. He found this sign 17 times in 20 cases of hemiplegia, although of course it is not apparent when the paralysis is complete. Klippel and Weil have also called attention to the thumb sign, that is, slight extension of the thumb as the other fingers are slowly lifted. They found this sign constant in 9 cases of hemiplegia with contracture, while it was never present with flaccid paralysis. The hand sign and associated adduction sign are observed with the flaccid form.

Archiv für Gynaekologie, Berlin

XC, No. 2, pp. 213-438. Last indexed March 5, p. 823

54 Intrauterine Injections in Treatment of Inflammation in the Adnexa. E. Aulhorn.
55 Seroreaction in Pregnancy and Puerperium. (Eine "Reaction" im Serum Schwangerer, Kreissender und Wöchnerinnen.) T. Heynemann.
56 Colon Bacillus Infection of the Female Urinary Passages in Pregnancy and the Puerperium. (Infection der weiblichen Harnwege durch das Bacterium coli commune in der Schwangerschaft und im Wochenbett.) P. Alsberg.
57 Closure of Botallo's Duct. (Der Verschluss des Ductus arteriosus Botalli.) F. Kirstein.
58 Lymphangioma of Fallopian Tube. R. Franz.
59 Relations between the Albumin in Human Milk and the Albumin in the Serum of Mother and Child. (Beziehungen zwischen dem Eiweiss der Frauenmilch und dem Serumeiweiss von Mutter und Kind.) A. Bauereisen.
60 Pathologic Anatomic Findings in Recurring Uterine Carcinoma. (Untersuchungsbefunde an Recidiven nach Uteruscarcinomoperationen.) M. Stickel.

Beiträge zur Klinik der Tuberkulose, Würzburg

XV, No. 2, pp. 175-302. Last indexed March 12, p. 916

61 *Dosage in Tuberculin Tests. A. van Balen.
62 Local Tuberculin Reaction in Clinically Sound Adults. Id.
63 *Effect of Tuberculosis on the Heart. F. M. Pottenger (Monrovia, Cal.).
64 Morphologic and Biologic Research on Tubercle Bacilli Stained with Methyl-Violet-Fuchsin. W. Knoll.
65 *Treatment of Laryngeal Tuberculosis in Public Sanatoriums. (Zur Behandlung der Kehlkopftuberkulose in der Volksheilstätte.) H. Clarus.
66 Probable Tuberculous Disease of the Lymphatic Apparatus. (Zur Kenntnis von Sternbergs sogenannter "Eigenartiger Tuberkulose des lymphatischen Apparates."). F. Graetz.
67 Problem of Experimental Immunization against Tuberculosis. G. Deycke and H. Much.

No. 3, pp. 303-482

68 *Clinical Experiences with Treatment of Pulmonary Tuberculosis by Nitrogen Injections. C. Saugman and T. B. Hansen.
69 Position of Diaphragm in Health and with Emphysema. (Der Stand des Zwerchfelles bei Gesunden und Emphysematikern.) Seefeldt.
70 Results of Combined Institutional and Tuberculin Treatment of Pulmonary Tuberculosis. (Mitteilung zu Bandeliers Arbeit, Band XV, Heft 1.) F. Köhler.

61. **Dosage for Tuberculin Tests.**—Balen has been testing the subcutaneous injection of tuberculin on clinically sound adults and found that a local reaction may occur in them even with the smallest doses, but the subjective phenomena: headache, nausea, drowsiness or insomnia, signs of a general reaction, were never observed in those free from tuberculosis. The signs of general reaction did not develop until a few hours after the absorption of the tuberculin which confirms that they are the effect of the action of the tuberculin, and equivalent to a positive diagnosis of tuberculosis. In small children the tuberculosis is always active. In adults it is important to know not only whether there is reaction, but the dose and the manner of the reaction. Only when there is infiltration and redness to a dose less than 1/100 mg. should enhanced susceptibility be assumed. A positive general reaction with only 1/10 mg. or less speaks for the disease. With active tuberculosis this reaction may occur with 1/100 or even 1/1000. He believes that his is the first research to determine the smallest amount of tuberculin which induces a reaction local, general or topical.

63. Abstracted in THE JOURNAL, Nov. 6, 1909, page 1595.

65. **Treatment of Laryngeal Tuberculosis in Sanatoriums.**—Clarus comments on the fact that laryngeal tuberculosis is rarely diagnosed when there are concomitant lung lesions. In 190 patients at the Görbersdorf Sanatorium only 50 had had the larynx examined and yet 16 of the others had a laryngeal process. It is of great importance for the prognosis of pulmonary tuberculosis to know whether there are complications on the part of the larynx. This is liable even with the mildest cases. Sunlight and induced hyperemia may be useful as adjuvants but too much reliance must not be placed on them. Absolute rest of the voice is of the greatest importance, supplemented by menthol, either as intralaryngeal injections of menthol oil or inhalation of hot menthol fumes for hours at a time. He injects a few drops of the 10 or 20 per cent. oil at first daily and then two or three times a week. As the best of all measures for general application in the sanatorium he commends the actual cautery under cocain; he has thus treated 34 patients with most excellent results, 14 being entirely cured and 17 improved. He cites a few typical cases from this experience.

68. **Treatment of Pulmonary Tuberculosis by Pneumothorax Induced by Injection of Nitrogen.**—Saugman and Hansen devote over 150 pages to a detailed report of their experiences with the artificially induced pneumothorax in 54 cases in nearly three years. They found *x*-ray examination indispensable. With the technic illustrated they have made 970 injections without a trace of tendency to air embolism. In 33 cases an interval of eight months at least has elapsed and

study of these cases shows that in combinaton with institutional treatment, it is possible to save a large percentage of patients otherwise hopelessly lost. This result was obtained in 11 out of 24 cases in which the treatment was completed. The method should be restricted to severe, predominantly unilateral pulmonary tuberculosis; it is free from danger and the technic is simple but in about a fourth of the patients the adhesions in the pleura render the method inapplicable. They never witnessed serious mishaps but in some cases there was effusion into the pleura which sometimes had a favorable influence on the outcome, although troublesome at first. The treatment must be kept up for one year at least in acute cases and for two or more years in the chronic. A number of skiagrams and tracings are appended.

Beiträge zur klinischen Chirurgie, Tübingen

January, LXVI, No. 1, pp. 1-192

71 *Tuberculosis plus Adenocarcinoma of the Breast. H. Klose and H. Vogt.
72 *Malignant Hypernephroma in Children. O. Franck.
73 *Malignant Chorioepithelioma Diagnosed Early by Abdominal Curetting. Lehmann.
74 Multiple Amniogenic Malformations plus Peculiar Tumor Formation. F. Grahl.
75 Ileus from Chronic Diverticulitis. (Darmverschluss bei chronischer Entzündung des Meckel'schen Divertikels.) H. Finsterer.
76 Primary Suture of the Lung. (Zur Frage der primären Lungennaht bei Lungenverletzungen.) W. Wolf.
77 *Transplantation of Blood Vessels. (Transplantation freier und konservierter Gefässe.) E. Bode and E. Fabian.
78 *Successful Transplantation of Parathyroid in Case of Thyreopriva Tetany. (Erfolgreiche Epithelkörperchentransplantation bei Tetania parathyreopriva.) W. Danielsen.
79 Perforated Gastric Ulcer in Etiology of Necrosis of the Pancreas. K. Fritsch.
80 Hernia in the Abdominal Wall Aside from the Median Line. (Ueber die Hernien der Bauchwand seitlich der Mittellinie unter besonderer Berücksichtigung der Hernien der Linea semilunaris Spiegelii.) A. Stühmer.
81 Hammer-Toe Flatfoot and Club-Toe Flatfoot. (Hammerzehenplattfuss und Klumpzehenplattfuss.) H. Rubritius.
82 *Influence of External Irritation in Origin of Carcinoma. (Bedeutung des äusseren Reizes für die Entstehung der Carcinome.) E. Rehn.
83 Sarcoma of the Omentum. (Netzsarkom.) Capelle.

71. **Combination of Tuberculosis and Neoplasms.**—Klose and Vogt report a case in which a tuberculous process and an adenocarcinoma developed coincidently in the right breast. The patient was a woman of 25 with objectively sound internal organs who had nursed her one child for about a year when the breast became painful and was treated for five months on the assumption of suppurative mastitis. The authors have been able to find only 16 similar cases on record, and they assume in their case that the cancer developed on a primary tuberculous process.

72. **Malignant Hypernephroma in Children.**—Franck reports a case in a boy of nearly 9, who had always been pale and weak. Six weeks after an acute pericarditis the symptoms of the malignant disease became apparent and the tumor soon penetrated into the thorax. This is the fourth case on record, he says, in which a malignant hypernephroma developed in a child. The other children were between 2 and 5 years old; in one the tumor had developed on a horseshoe kidney. All were distinguished by extreme malignancy but no hematuria was observed. In the 222 cases of hypernephroma he has found on record a traumatic factor was evident in only 8 instances.

73. **Early Diagnosis and Removal of a Chorioepithelioma.**—An apparently healthy woman of about 30 with a healthy child was brought to the hospital on account of persisting hemorrhage after abortion. Curetting disclosed nothing pathologic. A year later she was brought again on account of hemorrhage from abortion and high temperature, but nothing pathologic was found in the fetus. As the symptoms continued, the abdomen was opened and the site of the placenta was resected. It proved to be also the site of an incipient malignant chorioepithelioma, one of the earliest ever discovered, and probably the cause of the abortion and symptoms observed.

77. **Transplantation of Vessels.**—In the experiments reported from Garrè's clinic, the transplanted vessels were able to retain their structure for months, up to 122 days. Vessels kept in Ringer's or Locke's fluid could also sometimes be effectually transplanted, and even human vessels were successfully implanted in some of the animals.

78. **Transplantation of Parathyroid Tissue to Cure Tetany.**—Danielsen reports a case in which a woman of 51 with menacing postoperative tetany after removal of a very large colloid goiter was apparently saved by implantation of two parathyroids removed from two other patients at the same time during a strumectomy. The glands were transplanted in a few moments after their removal, being inserted in a pocket made for them between the fascia and the peritoneum, just above the umbilicus. A few severe convulsions occurred after the transplantation but they rapidly subsided in number and intensity and examination after seven months showed approximately normal conditions. The circumstances of the case seem to show, Danielson says, that the transplanted glands were mainly responsible for the favorable outcome of the case. The technic for strumectomy to avoid injury of the parathyroids is discussed in detail and the indications for transplantation.

82. **External Irritation in Development of Cancer.**—Rehn analyzes five typical cases from his experience in which external irritation might possibly have had something to do with the growth of a cancer. It was in a hemorrhoidal nodule in one case, in the palm of the right hand in another, and on the leg in the others.

Berliner klinische Wochenschrift

March 7, XLVII, No. 10, pp. 321-368

84 *Healing of Perforated Gastric Ulcer. (Heilung des perforierten Magengeschwürs.) M. Martens.
85 Special Form of Periostitis of the Jaw. (Eigenartige Form von Beinhautentzündung.) W. Spät.
86 *Permanent Retention of Urine. (Ungewöhnliche Fälle dauernder Harnverhaltung.) L. Casper.
87 *Intraneural Injections in Treatment of Neuralgia and Prevention of Salt Fever. O. Wiener.
88 *Gastroptosis and its Origin. M. Bönniger.
89 Casein Content of Human Milk. (Caseingehalt der Frauenmilch.) Engel and A. Frehn.
90 Recent Progress in Tropical Medicine. P. Mühlens.

84. **Healing of Perforated Gastric Ulcer.**—Martens has encountered 22 cases since 1895, all but 2 within the last 7 years. The patients were from 6 to 60 years old; most of them had suffered from stomach disturbances, but blood in the stomach content or stool had seldom been noticed, and in some cases the perforation occurred without any preceding symptoms. He discusses the differentiating signs: If the stomach content and pus have followed the colon down toward the region of the appendix it is liable to be painful, deceptively simulating appendicitis. Tense rigidity of the right side of the abdomen, especially the upper part, was evident in all but one of his cases. Soon after the perforation the abdomen is almost always retracted; distention follows as the intestines become paralyzed. That technic is best which makes least demands on the patient, namely, simple suturing in of the ulcer in two tiers. He has always been able to accomplish this, applying the suture transverse to the longitudinal axis of the stomach, at least at the pylorus, in order to prevent making it smaller. If the lumen is made smaller by the suture he makes a gastroenterostomy at once. The suture is reenforced with a flap of omentum. In one of his cases there were two perforated ulcers; a second one should always be looked for. Eleven patients of the 15 treated in this way were entirely cured, the main point being early recognition of the trouble, with prompt operation before peritonitis has had time to develop. He operated in from 2½ to 26 hours after the perforation. It is important, he adds, to impress on ulcer patients the possibility of perforation at any moment and the necessity for immediate operation. One man thus warned felt the perforation while in the street and took a cab at once for the hospital where the operation was done within an hour with the best results.

86. **Unusual Cases of Permanent Retention of Urine.**—In the first of Casper's two cases the trouble was evidently senile changes in the outer muscular layer of the bladder commanding the expulsion of the urine. The patient was a man of 60 and the only relief was by introduction of a retention catheter which he has worn uninterruptedly for 8 years. He urinates 8 times a day by removing the plug in the catheter, and twice a day rinses out the bladder to keep the inevitable cystitis within bounds. A new catheter is introduced every 6 or 8 weeks. By this means the patient is kept free from disturbances and attends to his business with practically no

inconvenience from his condition. In the second case the discovery of partial atrophy of the skin suggested that the retention of urine might be the result of a process of atrophy in the bladder, which proved to be the case. The changes observed in various muscles indicate trophoneurotic disturbances, coordinated processes of atrophy involving various organs. This patient is a man of 34 who has been unable to empty his bladder spontaneously for 6 years, but is doing well with the retention catheter, although a papilloma has developed where the crosspiece of the retention catheter rests on the bladder wall, but it causes no disturbances to date.

87. **Intraneural Injections in Treatment of Neuralgia.**—Wiener has treated 75 patients with long chronic sciatica by intraneural injection of chilled salt solution. He has never observed any injurious action but has been impressed with the benefit in certain cases as also in a case of the lancinating pains of tabes. No permanent benefit is derived unless the needle reaches the nerve, evidenced by the sudden intense pain extending down into the toes. He has injected 25 c.c. of the fluid in 26 cases of trigeminal neuralgia, injecting the fluid at the emerging point of the nerve; 2 of the patients were improved and 22 cured, also 5 other patients with neuralgic headache and 3 with lumbago. Immediate relief of the pain is most striking if the injection has been made strictly intraneural. The fever sometimes observed is due to the salt in the solution, and lately he has been avoiding this toxic action by using a mixture of 6 parts salt and 0.75 part calcium chlorid to 1,000 parts water; this secures the neutralizing action of the calcium chlorid on the salt so that there is no rise in temperature.

88. **Origin of Gastroptosis.**—Bönniger discusses the origin of the unusually long stomach which he ascribes to an abnormal mode of development of the body as a whole, the stomach growing downward where it has more space for development. The long stomach is comparatively rare in men, and he ascribes it to the lack of exercise among girls, and urges hygienic measures to prevent its development. Once developed nothing can be done to shorten the stomach, but it can be supported better by developing the muscles by gymnastic exercises. His statements are based on examination of 300 persons free from stomach disturbances, the connection between the shape of the stomach and the shape of the trunk being unmistakable. Gastroptosis in the true sense of the term, he declares, may occur from sliding down of the stomach as a whole from relaxation of its supports or lack of support from the intestines below.

Correspondenz-Blatt für Schweizer Aerzte, Basel

March 10, XL, No. 8, pp. 209-240

91 *Prophylaxis and Non-Operative Treatment of Appendicitis. O. Fiertz.

March 20, No. 9, pp. 241-288

92 Rational Treatment and Prophylaxis of Acute Tonsillitis. A. Schönemann.
93 *Retention of Fluid Simulating Obesity. (Durch Flüssigkeitsretention vorgetäuschte Obesitas.) E. Bernoulli.
94 *The Obligation to Professional Secrecy on the Part of the Physician. (Schweigepflicht des Arztes.) A. Jaquet.

91. **Prevention of Appendicitis.**—Fiertz explains the increasing prevalence of appendicitis as due to the change in the habits of city people. Instead of attending all day to household duties, women sit at work or sit at theaters or clubs long hours at a time, neglecting the calls of Nature and suppressing the desires. Sedentary occupations are becoming more common among men, and there is less opportunity and time to heed Nature's calls. The result is an increasing tendency to constipation, and this is responsible for the appendicitis. He ascribes the fatalities after appendectomy to the continuance of intoxication from putrefying matters in the intestines still left after the operation, while, he declares, thorough evacuation of the intestines would have answered the purpose without the operation, or at least would have usefully supplemented it. In 51 cases of acute appendicitis a prompt cure was realized by keeping the patients absolutely still in bed and giving a rectal injection of a glass of a 1 per thousand solution of salicylic acid, mixed with a glass of oil, the receptacle held as high as possible; then a quart of the salicylic solution is poured into the receptacle and allowed to flow slowly into the rectum. This is repeated once or twice a day and the patient not allowed to move. The injections must be given by an expert, possibly by the physician himself. Moist heat is then applied to the abdomen, and if necessary opium is given to relieve the pains. Perforation occurred in 12 of his cases, but under this treatment it was rapidly followed by encapsulation and the ultimate outcome was excellent in every case. Any foreign body in the appendix found its way through the perforation and passed off harmlessly. Twelve of the patients were between 5 and 10 years old and 17 between 20 and 30, and all have been under observation for years since, confirming the advantages of this oil and water medical treatment during the acute phase. Appendectomy later is a much less serious operation if deemed necessary, which he accepts in case the patient expects to live remote from hospital privileges. He adds that children should be trained to utilize the peristaltic movements that follow a meal to insure regular defecation at the same time each day. They can seldom spare the time for it in the morning.

93. **Obesity Simulated by Retention of Fluid.**—Bernoulli reports the case of a young woman with a nervous taint whose weight fluctuated remarkably at times independently of the amount of food consumed. The difference was evidently due to retention of fluid, though there was no actual edema, and displayed unmistakable connection with emotional stress and the onset of the menses. The metabolic findings are given in detail on various diets with or without thyroid treatment and abstention from salt, and the case is compared with somewhat similar ones in the literature. Between morning and night the patient's waist and bust measure would sometimes increase so that she was unable to get into her clothes. No permanent benefit was derived from the treatment instituted, although transient improvement followed each time.

94. **Professional Secrecy.**—The ordinances at Basel, Switzerland, require that any public official learning of any crime by virtue of his office must report it to the authorities. The physician in charge of the public hospital there recently enquired of the authorities whether this applied to cases of criminal abortion of which the medical force of the hospital may learn in treating the patients in their charge. If the medical men comply with the law and denounce the crime, women seeking relief after abortion will avoid the hospital and trust exclusively to quacks and others on whose discretion they think they can count. The authorities have been reconsidering the ordinance in consequence, and an expert opinion on the subject was asked of the local medical society. Jaquet's article was presented at a recent meeting to open the debate on the subject. He reviews the laws in regard to privileged communications in various European countries, presenting an able summary of legal decisions and the opinions of leading medical men. The tendency of his conclusions is in the line of still greater reticence on the part of the physician even when the interested parties release him from the professional obligation of secrecy. The physician alone can be the judge as to the propriety of revealing what he has learned in the practice of his profession and no one can foretell the far-reaching consequences of disregard of professional secrecy in any given instance. The confidences of the patients in a public hospital should be respected just as in private practice. He comments on the general lack of appreciation among the public of the physician's attitude in respect to professional reticence. No one seems to think he is committing an indiscretion to enquire of a physician in regard to the diagnosis and prognosis of some patient in his charge. The laity seem to think that the physician can chat in regard to his patients without restriction so long as a non-venereal or non-mental affection is in question, and even in the latter case they do not hesitate to enquire at times. Jaquet remarks that it is not uncommon for patients to give a wrong address or name or beg that their family physician should not be informed, fearing that outsiders may learn what they wish to conceal. In one case he directed a patient to go to a certain specialist but the patient refused, saying, "I will not go to Dr. X.; he tells everything." The advantage of a legal recognition of the privileged communication is obvious as both physicians and public are reminded constantly by it of their mutual obligations and privileges. The physician when questioned can refer to the law, while the public, on the other hand, gains greater con-

fidence in the profession. Jaquet cites a number of instances to show the evil effects of a lack of reticence, as for example when a family physician warned a wife that her husband had recently acquired syphilis. The wife nearly became insane, the home was wrecked and—she blamed the physician for all the trouble. With thoughtfulness and tact, the desired results can nearly always be accomplished without breach of professional secrecy. For instance, if a father before the marriage of his daughter consults a physician in regard to the health of the son-in-law-elect, the physician may advise the father to stipulate that the young man must take out a life-insurance policy. If the applicant is rejected, the father can draw his own conclusions. When young people hesitate to inform their parents of disease, the physician should urge them to confide in the parents as this is usually the only way to ensure suitable and systematic treatment, or the physician may offer to make the confession in the name of the young patient; his experience and tact may render the communication much less of a shock for the parents. Brouardel found this course to have many advantages in his experience as medical adviser of a large preparatory school at Paris. The French are particularly stringent in regard to professional secrecy; one of their writers says that no one is sure enough of himself to put his conscience in the place of the law. The conception of circumstances requiring the "justifiable defense of the community" should be acted on only as the very last resort. At the same time, Jaquet regards it as the duty of the physician to denounce to the authorities cases in which children, neglected by their parents or the latter consenting, are being sacrificed to immoral purposes. The Swiss law imposes a penalty on servants, employees, etc., for willfully concealing the existence of contagious disease and thus imperiling the health of the family, other factory hands, etc. By insisting on this law the physician can usually persuade the one affected to inform his employer himself.

Deutsche medizinische Wochenschrift, Berlin

March 17, XXXVI, No. 11, pp. 489-544

95 *Electric Cauterization. (Ueber Operationen mit dem elektrischen Lichtbogen und Diathermie.) V. Czerny.
96 Segmental Diagnosis of Spinal Cord Lesions. (Kasuistische Beiträge zur Segmentdiagnose des Rückenmarks.) F. Engels.
97 Pityriasis Capitis as a Factor in Baldness. (Ueber Pityriasis capitis und ihre Bedeutung für den Haarausfall.) K. Herzheimer.
98 Case of Typhoid plus Colon Bacillus Infection and Colon Bacillus Pneumonia. G. Kiralyfi.
99 Simplified Neisser Stain for Diphtheria Bacilli. P. Sommerfeld.
100 *Transient Positive Response to Wassermann Reaction after General Anesthesia. G. Wolfsohn.
101 Hecht's Modification of the Wassermann Reaction. R. W. König.
102 *Mishap after Scopolamin-Morphin-Chloroform Anesthesia. J. Faust.
103 Management of Narrow Pelvis in General Practice. (Die Reformen in der Therapie des engen Beckens und die Praxis.) F. A. Scheffzek.

95. **Deep Electric Cauterization and Thermopenetration in Cancer.**—Czerny has made extensive application of fulguration, Arsonvalization and other methods of deep intensive electrocauterization and reports his experiences in 61 cases of cancer. The methods to date do not insure against recurrence more than the procedures hitherto in vogue, but he urges further work in this line, believing that it may be possible by electric means to affect cancer germs in the depths to such an extent as to inhibit their growth and thus enable the organism to gain the upper hand over them, with possibly some assistance from without to enhance the natural defensive processes.

100. **The Wassermann Reaction Changed After General Anesthesia.**—Wolfsohn applied the Wassermann test to the serum of a patient just before an operation and by chance again after the operation. The findings with the test were entirely negative with the first specimen of serum but with the second specimen there was a pronounced positive reaction. He then examined the serum from 50 other patients immediately after general anesthesia and obtained a pronounced positive reaction in 13 cases, in 11 of which syphilis could be positively excluded. The anesthesia was induced with a combination of veronal, morphin, scopolamin and ether and he warns that the findings in the serum after general anesthesia must not be accepted as conclusive in regard to the presence of syphilis.

102. **Mishap from Scopolamin-Morphin Anesthesia.**—Faust's patient was a robust youth of 17 and an hour after appendectomy there was spasmodic contraction of the throat musculature with extreme cyanosis. Artificial respiration was impossible and the spasm suddenly subsided spontaneously but soon recurred. This was repeated about six times, the attacks growing milder until by the end of the hour the patient was out of danger. Faust ascribes the spasm to the scopolamin and remarks that the frantic measures to restore respiration, kept up for over an hour, did not seem to disturb the healing of the wound which he says suggests that patients may safely be allowed to get up earlier than is now the rule.

Deutsche Zeitschrift für Chirurgie, Leipsic

February, CIV, Nos. 1-2, pp. 1-208

104 *Surgery of Liver and Bile Ducts. (Zur Chirurgie der Leber und der Gallenwege.) A. Jenckel.
105 *Acute Hemorrhagic Pancreatitis Cured by Prompt Operation. L. Imfeld.
106 Perineal Prostatectomy with Lateral Incision. M. Wilms.
107 Cholangitic Liver Abscess. (Zur Kenntnis der cholangitischen Leberabszesse.) S. Schönberg.
108 Absorption of Lead from Retained Bullets. (Bleiresorption aus steckengebliebenen Projektilen.) Wieting and L. Effertz.
109 Injury of the Diaphragm and Operative Treatment. (Ueber Zwerchfellverletzungen und ihre operative Behandlung.) W. Wolf.
110 *Carcinoma of Face and Scalp. (Zur Statistik der Carcinome des Gesichtes und der behaarten Kopfhaut.) G. Marassovich.

104. **Gall-Stone Operations.**—Jenckel reviews the operations on the biliary apparatus since his previous reports at the surgical clinic at Göttingen in charge of Braun, the total now amounting to 230 in the course of 13 years. The series is unique in the fact that all but 2 of the patients have been traced to date, so that the ultimate outcome is known in all but these 2. Cholecystectomy gave the best final results.

105. **Acute Hemorrhagic Pancreatitis.**—The patient in the case reported was a mechanic of 36. The first symptoms were repeated vomiting and pain in the stomach region, yet he was able to continue at work for a week. Then symptoms developed suggesting ileus but closer examination differentiated acute pancreatitis, and the capsule was slit for 3 or 4 cm. and a Mikulicz tampon applied directly to the pancreas. The abdomen was sutured around this and a glass drain, and after expulsion of a few sequesters of pancreas tissue the patient made a smooth recovery. The case permitted considerable research on the functioning of the pancreas as the fistula did not heal for about four months and numerous tests were made.

110. **Carcinoma of the Face and Scalp.**—Marassovich gives an analytic study of 182 cases of this kind during the last 8 years at the surgical clinic at Vienna in charge of Hochenegg. The list includes 80 women. In 3 cases the patients were between 24 and 30; in 7 between 30 and 40; the others were older. The first symptom of trouble had been noticed from 4 weeks to 20 years before the patients applied for relief. In 4 cases the cancer had developed on lupus. In 26 cases the cancer on the face was multiple; in 2 there was cancer elsewhere. In 3 cases a family tendency was unmistakable.

Medizinische Klinik, Berlin

March 13, VI, No. 11, pp. 411-450

111 Antistreptococcus Serotherapy in Staphylococcus Sepsis. H. Eichhorst.
112 *Specific Diagnosis and Treatment of Tuberculosis in Children. Engel. Commenced in No. 10.
113 What is Disease? (Krankheit.) N. P. Tendeloo.
114 *Sudden Death at Spas. (Ueber plötzliche Todesfälle in den Kurorten.) E. H. Kisch.
115 Technic and Results of Respiratory Exercises in Bronchial Asthma. (Atmungsgymnastik beim Bronchialasthma.) L. Hofbauer.
116 Differentiation of Natural and Artificial Honey by Fixation of Complement. (Zur Frage der Differenzierung von Natur- und Kunsthonig auf biologischem Wege.) A. Schütze.

112. **Diagnosis and Treatment of Tuberculosis in Children.**—Engel remarks that active pulmonary tuberculosis is often diagnosed in children when it is not present. Dulness and changes in expiration are frequent in children but do not always indicate an apical process. The extent of a tuberculous process is revealed by the rapidity of the response to the tuberculin test and by the delay before tolerance to a larger dose is realized. Most significant is the behavior of the temperature during the repeated application of the same dose at

one-day intervals. Repeatedly recurring reaction to a small dose indicates an extensive lesion. A positive reaction with a dubious process does not always indicate that the process in question is tuberculous; there may be some latent process in some gland, while the manifest lesion may be of another character. The decision here depends on the local reaction that is observed even with a dose too small to affect the temperature. He urges that servants, etc., should be examined for tuberculosis before being engaged, while the medical school inspectors should guard the children by removing sources of contagion in teachers and schoolmates. If a tuberculous process is discovered or is revealed by a tuberculin reaction, the child should be given the benefit of systematic treatment, even though apparently healthy. This is all the more important the younger the child. After the age of 6, occult tuberculosis may not require such intensive treatment but it should never be neglected. The climate is of the greatest importance, but he warns that children should not be sent to the seashore, etc., merely with the parents or attendants; they require sanatorium care. Tuberculin treatment is particularly easy in the case of children as they have only a slight susceptibility and do not require the extensive courses of adults. Children adapt themselves readily to the tuberculin but the malignancy of pulmonary tuberculosis in a child renders tuberculin treatment of little use for this. The effect of tuberculin treatment, he asserts, is most pronounced with bone and joint tuberculous affections.

114. **Sudden Deaths at Health Resorts.**—Kisch has compared the autopsy findings with the clinical history in 156 cases of sudden death. The liability to a sudden fatality in persons with heart disease increases with age; under 30 sudden death is no more frequent than in persons with sound hearts. After 50, patients with cardiovascular disease should reckon with sudden death as a possible contingency, especially when there is a tendency to lipomatosis or general arteriosclerosis. Of especially bad omen is the coincidence of mitral insufficiency with endarteritis and insufficiency of the aorta when examination reveals advanced fatty degeneration of the myocardium and considerable dilatation of the left ventricle. This combination of mitral and aortic insufficiency was evident in 15 per cent. of his cases. The combination of pulmonary emphysema with the heart disease is also liable to entail sudden death. With heart disease even the most apparently harmless cause may bring on the fatality, especially emotions or anything that raises the blood pressure. He warns most seriously against the practice of allowing the sick at a watering place to take the baths, exercises, etc., without medical advice, citing several striking cases from his experience at Marienbad. Among them was that of a man of 46 who drank several glasses of mineral water immediately on arriving after a long journey and dropped dead. A letter from his home physician later stated that he had an incompensated cardiac defect. Kisch always impresses on the patient with heart disease that the most serious results may follow failure to comply with the medical directions in regard to drinking, bathing, eating and exercising, and he warns the family of the possibility of a sudden fatality. He even pleads to have the baths and other "cure" measures only accessible on a medical order, or at least that the authorities should post placards urgently advising the guests not to take the "cure" or any part of it without medical advice. The number of persons with heart disease who visit the spas is constantly increasing while the measures are becoming more complicated, and such two-edged swords are best wielded by the physician. In conclusion Kisch urges careful records of sudden death in the watering places and, in addition, extensive autopsy.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

March, XXXI, No. 3, pp. 275-414

117 Local Defensive Reaction to Irritation; Absorption of Fat in the Ovary and Omentum. K. Ulesko-Stroganowa.
118 Management of Mentoposterior Face Presentation. (Zur Behandlung der Mentoposterioren Gesichtslage.) F. Unterberger.
119 *Treatment of Uterine Myomas. A. Troell.
120 Metastatic Ovarian Carcinoma. F. Cohn.
121 *Inheritance of Syphilis. (Zur Lehre von der Vererbung der Syphilis). O. Frankl. Commenced in No. 2.
122 Recent Research on Ergot. (Ergebnisse der neueren Mutterkornforschung.) A. Bennecke.

119. **Treatment of Uterine Myoma.**—Troell gives tabulated details of 100 cases of uterine myoma, supplementing a previous series of 105 cases, being 52.03 per cent. of the total 394 myoma cases at the clinic for women's diseases at Lund. In 9 cases simultaneous malignant disease was discovered in the uterus. The ultimate outcome in the total 205 cases speaks in favor of supravaginal amputation as the results are equally good as those of hysterectomy while it is a much less serious operation. The myoma recurred in 22.2 per cent. of the 18 cases in which it was merely enucleated or resected. The 2 fatal cases of pulmonary embolism in his experience occurred after hysterectomy, and the fatality in another case was the result of injury of the bladder during a hysterectomy. In one of the fatal embolism cases the operation had been done during the menses, in the other after excessive loss of blood.

121. **Inheritance of Syphilis.**—Frankl reviews the experiences in this line at the clinic in charge of Schauta at Vienna. These do not indicate that it is wise to institute mercurial treatment of apparently sound women on the basis of a positive seroreaction alone unless the woman has given birth to a syphilitic child. In this case she evidently has latent infection and specific treatment is required without waiting for further manifestations of the disease. On the other hand, a positive reaction in the child, although it may be apparently healthy, should indicate specific treatment. If the child with inherited taint shows no signs of syphilis and gives a negative seroreaction, it might be well to wait for some manifestations on its part, commencing mercurial treatment at the first signs of "snuffles," or if the seroreaction becomes positive on repeated tests. This may result in some child escaping specific treatment who should have had it, but, on the other hand, it is not a pleasant idea for the physician to find that he has inflicted on a sound child an unnecessary and by no means entirely harmless course of mercurial treatment. The details of 87 cases are summarized.

Münchener medizinische Wochenschrift

March 8, LVII, No. 10, pp. 505-560

123 Muscle Hernia. (Ueber Muskelhernien.) E. Lexer and H. Haus.
124 Easy Technic for Diagnosis of Syphilis by Wassermann Reaction. (Wie kann der Arzt die Wassermannsche Reaktion ohne Vorkenntnisse leicht vornehmen?) E. v. Dungern.
125 *Heart Disease and Psychoses. (Herzkrankheit und Psychose.) L. Saathoff.
126 *Clinical Picture of Infantilism and Hypoplasia. A. Mayer.
127 *Connection between Dysmenorrhea and Tuberculosis. E. Gräfenberg.
128 Fracture of Fifth Lumbar Vertebra from Lifting. (Zur Kenntnis des Verhebungsbruches am 5. Lendenwirbel.) Delorme.
129 Immunization against Acute Poliomyelitis. (Ueber Immunität und Immunisierung gegen das Virus der epidemischen Kinderlähmung.) P. H. Römer and K. Joseph.
130 *Congenital Absence of Pericardium. (Zur Klinik der Herzbeuteldefekte.) E. Ebstein.
131 Substitutes for Cocain in Rhinology and Laryngology. (Haben sich in der Rhino-Laryngologie die Ersatzmittel des Kokain bewährt?) M. Senator.
132 Apparatus for Electrocardiography. (Universal-Registrier-Apparat Modell Bock-Thoma.) H. Pock.
133 Medical Course in Obstetrics. (Das geburtshilfliche Seminar und die geburtshilflich seminaristischen Uebungen.) G. Leopold.
134 *Professional Secrecy and Venereal Disease. (Aerztliches Berufsgeheimnis und Geschlechtskrankheiten.) Hecht.

125. **Heart Disease and Psychoses.**—Saathoff reports three cases showing that syphilities with failing compensation are liable to present mental symptoms from the disturbances in the circulation in the brain injured by the constitutional syphilis. The psychosis in his cases was a kind of distressed confusion, hallucinations and motor agitation. The autopsy findings are given in each case; the brain showed traces of atrophy with secondary hydrocephalus. Conditions are somewhat similar in these cases to alcohol delirium; injuries which pass without a reaction on the part of a normal brain may induce a typical psychosis. Saathoff reviews the literature on the subject of the connection between aortic aneurisms and other circulatory affections and insanity.

126. **Clinical Picture of Infantilism and Hypoplasia.**—Mayer remarks that in these days of insurance against disability, it is important to study the cases of congenital disability, and he reviews the various types of infantilism and hypoplasia as affecting various organs. Besides corporal anomalies there are

often psychiatric and neurologic abnormal conditions. In 60 cases of infantilism he noticed evidences of morbid conditions in the nervous system in 20 cases. The frequent combination of exophthalmic goiter with anomalies closely allied with defective development, such as chlorosis, inherited syphilis, tuberculosis, persisting thymus and adenoids sustains, he asserts, the assumption of a congenital physical inferiority as a factor in the Basedow syndrome. This seems the more reasonable, he believes, as the tendency to exophthalmic goiter and to the nervous and mental symptoms observed with it seems to be congenital. It is especially significant that the disturbance underlying the Basedow syndrome is in the thyroid, which has such an important influence on the general development and is evidently closely connected with the functions of the female genitalia, and is also involved in infantilism. Exophthalmic goiter, he says, is often associated with hypoplasia in the genitalia.

127. **Dysmenorrhea and Tuberculosis.**—Gräfenberg's experience confirms the assumption that dysmenorrhea has an underlying tuberculous infection as a factor in many cases. Eisenstein reported a year or two ago that 118 women with menstrual disturbances gave a positive reaction to a subcutaneous injection of tuberculin, although there was nothing else to suggest tuberculosis. Gräfenberg found in 3 cases tuberculous lesions at autopsy of young women who had been treated for dysmenorrhea. In another case of the kind the severe abdominal pain compelled laparotomy, which revealed advanced tuberculous lesions in the pelvic organs. Pfannenstiel has reported a case in which rapid miliary tuberculosis in the abdomen followed laminaria dilatation of the cervix done for dysmenorrhea; the patient was an apparently healthy young woman. Gräfenberg obtained a positive response to the tuberculin test in 21 of 30 patients who had applied for relief from primary dysmenorrhea. The response was always negative in the cases of secondary dysmenorrhea. With the primary form the genitalia are always defectively developed. In 11 cases there was also a local reaction in the genitalia. These findings suggest that the defective development of the genital organs was the consequence of some tuberculous process in the pelvic organs during childhood, this process possibly healing. The menstrual hyperemia induces the dysmenorrheic disturbances in the imperfectly developed genital organs. A system of organs already the site of a tuberculous process and consequently defectively developed, is much more liable to new disease than a sound organ. He concludes from his research and experiences that tuberculin treatment may prove successful when primary dysmenorrhea is accompanied by a local reaction to tuberculin. In 6 cases he has obtained most excellent results by this means, the dysmenorrhea and other pelvic symptoms subsiding, the general health improving and the weight increasing. He gives the tuberculin injection twice a week. In conclusion he warns against the slightest local intervention with primary dysmenorrhea as liable to arouse a latent general tuberculosis. This danger is especially imminent when the tubercle bacilli are in the circulating blood; curetting the uterus or even an insignificant local measure might lead them to settle at this point.

130. **Congenital Absence of the Pericardium.**—Ebstein reports a case in which the patient, a young woman, seemed to be healthy after an attack of typhoid, followed by what was diagnosed as a post-infectious myocarditis, but autopsy a few months later, the patient having died from acute potassium cyanid poisoning, revealed that the pericardium was missing. He has found records of 31 other cases of missing pericardium and reviews the clinical picture, which resembles in many respects that of movable heart.

134. **Professional Secrecy and Venereal Disease.**—Hecht recently had occasion to operate for a nasal affection on a patient and found later that the patient was under treatment at the same time for recent syphilis, in the charge of a local dermatologist. He reproached the patient for not informing him of his recent syphilis, but the latter declared that the dermatologist had consented to the operation. Hecht then reproached the specialist who said that he had told the patient to warn the operator, and declared that he had no right to warn the latter himself. Hecht discusses the arguments on this question of secrecy and the prophylaxis of venereal disease and suggests the following two topics for discussion in medical societies: 1. Is it the ethical duty of a physician to warn the surgeon or dentist who is to undertake an operation on a patient with recent syphilis in his charge? 2. Is it the duty of the physician to seek for the source of the infection when a patient with recent syphilis applies to him? Is it the duty of the physician to ascertain whether the infecting person is already receiving appropriate treatment, and if not, to take measures to insure this and close this source of infection?

Wiener klinische Wochenschrift, Vienna

March 17, XXIII, No. 11, pp. 386-424

135 *Serum Anaphylaxis in Guinea-Pigs. (Experimentelle Studien über Anaphylaxie. III.) A. Biedl and R. Kraus.
136 *Treatment of Obesity. (Behandlung der Adipositas.) K. E. Wagner.
137 *Interval Before Coagulation in Connection with Kidney Functioning. (Blutgerinnungszeit und Nierenfunktion.) R. Bachrach and W. Tittinger.
138 *Research on Susceptibility to Action of Radium. (Zur genaueren Kenntnis der Radiosensibilität. II.) G. Schwarz.
139 *Carlsbad Waters in Treatment of Epilepsy. E. Biernacki.

135. **Experimental Study on Anaphylaxis.**—Biedl and Kraus have continued their research on serum anaphylaxis in guinea-pigs and here report spasmodic contraction of the bronchial musculature, entailing acute swelling and rigidity of the lung, as one manifestation of the induced anaphylaxis, the phenomena resembling remarkably the acute attack of bronchial asthma in man.

136. **Treatment of Obesity.**—Wagner classifies acquired obesity as A, due to immoderate eating, or lack of exercise or both; B, obesity due to abnormal functioning of glands with an internal secretion; and C, obesity from spontaneous anomalies in the cellular metabolism. The inherited form, A, is due to constitutional weakness of the functioning of the glands with an internal secretion; B, is due to inheritance of spontaneous anomalies in cellular metabolism. Treatment based on this classification has given excellent results in his hands, especially on the assumption of defective thyroid functioning. His list includes 149 cases of obesity during the nine years before 1908. Thyroid treatment proved more or less effectual in every instance, especially when alternated with mineral water. The ages of the patients ranged from 10 to 70; his principle is to give small doses 2 or 3 times a day. The maximal dose is about half of a moderate sized gland. Slight symptoms of intolerance were observed in 17 cases, the treatment being suspended at the first sign of it, this first sign being generally "tired eyes."

137. **Coagulating Time and Kidney Functioning.**—Bachrach has been investigating the cryoscopic urine and blood findings in connection with the time required for the blood to clot. His findings seem to demonstrate that the interval before clotting is dependent on the concentration of the blood, as he describes in detail.

138. **Application of Radium Under Suction.**—Schwarz reports experiences which seem to contradict what has previously been learned in regard to the action of radium. Applied to the arm under a suction bell, the reaction to the radium rays occurred more rapidly but was at the same time much milder and more transient.

139. **Carlsbad Waters in Treatment of Epilepsy.**—Biernacker refers to several cases in which a course of Carlsbad waters for gastrointestinal disturbances seemed to have a favorable influence on long-existing epilepsy. The results were so good that he urges prescribing a course at Carlsbad as a routine measure for certain patients with epilepsy, especially those in whom migraine accompanies or substitutes the epileptic seizures or those with some metabolic disturbances, uric acid diathesis with oxalate stones in the urine and pain in the joints and limbs. It was in such cases that the results were most striking.

Zentralblatt für Chirurgie, Leipsic

March 19, XXXVII, No. 12, pp. 433-464

140 Deformity of the Ankle from Congenital Malposition of the Fibula. (Die Volkmann'sche Sprunggelenksdeformität als Folge angeborener fehlerhafter Lage der Fibula.) J. G. Chrysospathes.
141 Excision of Free Bodies in Joints. (Zur Exzision von freien Gelenkkörpern.) E. E. Goldmann.

Zentralblatt für Gynäkologie, Leipsic

March 19, XXXIV, No. 12, pp. 401-432

142 Differentiation of Hemolytic Streptococci by Cultivation in Lecithin Bouillon. F. Fromme.
143 Extramedian Abdominal Incision. (Ueber einen verbesserten extramedianen Bauchdeckenschnitt bei Köliotomien.) A. Gubaroff.
144 The Eclampsia Problem. (Bemerkung zum Artikel von Dr. Alsberg in Nr. 1, ds. Jhrg.) J. Hofbauer.

Zentralblatt für innere Medizin, Leipsic

March 19, XXXI, No. 12, pp. 297-320

145 *Selection of Patients for Public Tuberculosis Sanatorium Treatment. (Kritische Bemerkungen zur Auslese von Lungenheilstättenpatienten.) Zickgraf.

145. **Selection of Patients for Tuberculosis Sanatorium Treatment.**—Zickgraf is in charge of a tuberculosis station where the patients are under observation for a time for more exact diagnosis of the presence and stage of their tuberculosis before being sent to the public sanatorium. When a patient gives a negative reaction to a subcutaneous injection of 10 mg. tuberculin, he regards this as excluding tuberculosis. He has encountered 110 such cases in his experience with 1,200 applicants. The anamnesis is of the slightest importance for the diagnosis, especially coughing up blood; persons are often deceived by blood from the nose or gums, and it is possible for blood to be coughed up even in the absence of tuberculous lesions. These 110 patients who thought they had tuberculosis required rest and were given a course of tonics, etc., as most of them were neurasthenics. The German laboring classes regard a free course in a sanatorium as something very desirable, and they exaggerate, he says, if necessary to obtain it, so that these observation stations and injection of tuberculin up to 10 mg. are proving valuable aids in eliminating those not needing specific treatment.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 8, XXXI, No. 29, pp. 305-312

146 *Efficacy of Camphoric Acid in Treatment of Sweats in Tuberculosis. (I sudori profusi nella tubercolosi polmonare.) E. Levi.

March 10, No. 30, pp. 313-320

147 Efficacy of Camphor Bromid in Chorea. (Due casi di corea di Sydenham guariti col bromuro di canfora.) G. Ghetti.

146. **Camphoric Acid in Treatment of Sweats in Tuberculosis.**—E. Levi reports 20 cases to demonstrate the efficacy of camphoric acid in treatment of the sweats in phthisis. He gives 2 gm. (30 grains) in two doses during the day or evening, and found it effectual in many cases in which all other measures had failed to relieve. The sweats are probably due to a number of factors acting on the centers for respiration and transpiration, and the camphoric acid seems to influence them all while it is well borne and causes no symptoms of intoxication. He kept up this treatment until the sweats entirely disappeared. Camphorated alcohol rubbed into the skin is also useful, he states, in aiding the effect with other drugs, but their combined action is far less powerful than the camphoric acid alone.

Policlinico, Rome

March 20, XVII, No. 12, pp. 355-380

148 Experimental Research on Production of Cartilage in Healing of Fractures. R. Merlani.
149 Treatment of Puerperal Fever by Intravenous Injections of Mercuric Chlorid. V. Forli.
150 Infantile Splenic Anemia from Leishmann Parasites. (Kala-azar?) G. Donzello.
151 Two Cases of Lipoma in the Mesentery. A. Giampaoli.

Riforma Medica, Naples

March 7, XXVI, No. 10, pp. 253-280

152 *Blood Findings in Animals Long Given Small Doses of Quinin. (Ricerche sul sangue degli animali sottoposti a piccole e ripetute dosi di chinina.) D. De Sandro.
153 Calculus in Diverticulum in the Urethra. A. Reggianini.

152. **Influence on the Blood of Long-Continued Small Doses of Quinin.**—The tabulated details of extensive research in this line on dogs at Rummo's medical clinic at Naples demonstrate, DeSandro asserts, that small doses of quinin have a favorable effect on the blood even when long continued. The proportion of hemoglobin increased in the dogs, as also the number of red corpuscles and an active leucocytosis of polynucleated cells was observed. The daily dose of quinin approximated 0.4 gm. for each 70 kilograms of weight (about 6 grains to 154 pounds of weight); this is the dose generally given by the mouth in the prophylaxis of malaria. It was injected subcutaneously into the dogs. When the daily dose surpassed this an injurious influence on the blood was soon apparent.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE OPTIC NERVE AND THE ACCESSORY SINUSES OF THE NOSE. A Contribution to the Study of Canalicular Neuritis and Atrophy of the Optic Nerve of Nasal Origin. By Prof. A. Onodi of the University of Budapest, Member of the Hungarian Academy of Sciences. Authorized Translation by J. Luckhoff, M.D. Cloth. Price, $3.50 net. Pp. 101, with 50 illustrations. New York: William Wood & Co., 1910.

DIE FORENSISCHE BLUTUNTERSUCHUNG. Ein Leitfaden für Studierende, beamtete und sachverständige Aerzte und für Kriminalisten. Von Dr. Otto Leers, Assistent der königlichen Unterrichtanstalt für Staatsarzneikunde an der Universität Berlin. Paper. Price, 6 marks. Pp. 212, with illustrations. Berlin: Verlag von Julius Springer, 1910.

EPIDEMIC POLIOMYELITIS. Nervous and Mental Disease Monograph Series No. 6. Report on the New York Epidemic of 1907. By Collective Investigation Committee. Paper. Price, $2. Pp. 119, with 14 illustrations. New York: The Journal of Nervous and Mental Disease Publishing Co., 1910.

THE FIFTH REPORT OF THE CANCER COMMISSION OF HARVARD UNIVERSITY. (Founded by Caroline Brewer Croft, June 16, 1899). Formerly the Caroline Brewer Croft Fund Cancer Commission. Paper. Pp. 297, with illustrations. Boston: The Medical School of Harvard University, 1909.

MEDICINE IN THE COLONIES. By William S. Wadsworth, M.D. A Paper Read before the Pennsylvania Society of the Order of the Founders and Patriots of America. [Secretary, T. A. Van Dyke, Jr., Union League Club, Philadelphia.] Jan. 14, 1910. Paper. Pp. 16.

A COURSE OF LECTURES ON TUMORS GIVEN UNDER THE AUSPICES OF THE CANCER COMMISSION OF HARVARD UNIVERSITY. (Founded by Caroline Brewer Croft, June 16, 1899). Paper. Pp. 80, with illustrations. Boston: Medical School of Harvard University, 1909.

PRACTICE OF OSTEOPATHY. Its Practical Application to the Various Diseases of the Human Body. By Charles H. Murray, A.B., Author of "Genuine Osteopathy," etc. Half-Morocco. Price, $3.50. Cloth, $2.50. Pp. 338, with 107 illustrations. Elgin, Ill., 1909.

DIE PROCTO-SIGMOSCOPIE UND IHRE BEDEUTUNG FÜR DIE DIAGNOSTIK UND THERAPIE DER KRANKHEITEN DES REKTUM UND DER FLEXURA SIGMOIDEA. Von Dr. H. Strauss in Berlin. Cloth. Price, 7.50 marks. Pp. 149, with illustrations. Leipzig: G. Thieme, 1910.

LA TENSION ARTÉRIELLE EN CLINIQUE. Sa Mesure; Sa Valeur Semeiologique. Par le docteur Louis Gallavardin, Médecin des Hôpitaux de Lyon. Paper. Price, 4 francs. Pp. 206, with 70 illustrations. Paris: G. Steinheil, 2, rue Casimir-Delavigne, 1910.

NERVOUS STATES, Their Nature and Causes. By Paul Dubois, M.D., Professor of Neuropathology at the University of Berne. Authorized Translation by Edward G. Richards. Cloth. Price, 75 cents. Pp. 101. New York: Funk & Wagnalls Co., 1910.

TRANSACTIONS OF THE CONNECTICUT HOMEOPATHIC MEDICAL SOCIETY, Organized 1851. Incorporated 1864. Fifty-ninth Annual Meeting, New Haven, May 18. Semi-Annual Meeting, New Britain, Oct. 19, 1909. Paper. Pp. 145, with illustrations.

ANNUAL REPORT OF VASSAR BROTHERS' HOSPITAL, READE PLACE, POUGHKEEPSIE, N. Y. Founded by Matthew Vassar, Jr., and John Guy Vassar. Incorporated June, 1882. March 1, 1909, to March 1, 1910. Paper. Pp. 28.

TWENTY-EIGHTH ANNUAL REPORT OF THE STATE HOSPITAL FOR THE INSANE AT WARREN, PA. For the Year Ending Nov. 30, 1909. To the Board of Commissioners of Public Charities. Paper. Pp. 129, with illustrations.

FORTY-FOURTH ANNUAL REPORT OF ST. FRANCIS' HOSPITAL. East 142d Street, New York City. Under the Charge of the Sisters of the Poor of St. Francis. For the Year 1909. Paper. Pp. 39, with illustrations.

THE INTERNATIONAL MEDICAL ANNUAL. A Year-Book of Treatment and Practitioner's Index. Twenty-Eighth Year, 1910. Cloth. Price, $3.50. Pp. 762, with 108 illustrations. New York: E. B. Treat & Co.

AN OUTLINE OF INDIVIDUAL STUDY. By G. E. Partridge, Ph.D., Formerly Lecturer in Clark University. Cloth. Price, $1.25 net. Pp. 240. New York: Sturgis & Walton Co., 1910.

AN ACCOUNT BY THE MILK AND BABY HYGIENE ASSOCIATION TO MARCH 1, 1910. Paper. Price, 15 cents. Pp. 37, with illustrations. Boston: Milk and Baby Hygiene Association.

REPORT OF THE COMMISSIONER OF EDUCATION FOR THE YEAR ENDED JUNE 30, 1909. Vol. II. Cloth. Pp. 1373. Washington: Government Printing Office, 1910.

TRANSACTIONS OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION. For the Year 1909. Vol. XXV. Cloth. Pp. 287, with illustrations. Philadelphia, 1909.

EXTRACT FROM THE THIRTIETH ANNUAL REPORT, NEW YORK STATE DEPARTMENT OF HEALTH, 1909. Paper. Pp. 56.

THIRTY-FIFTH REPORT OF THE SALEM HOSPITAL FOR THE YEAR 1909. Paper. Pp. 39.